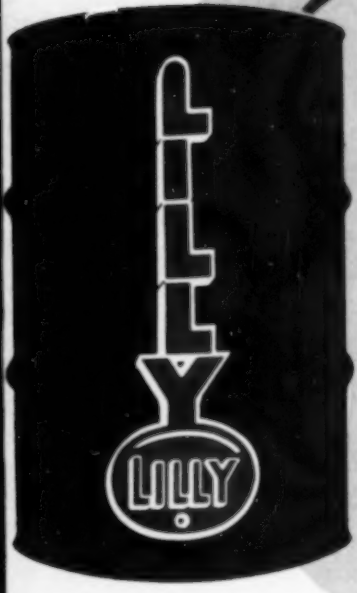
Industrial FINISHING



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THE Lilly FINISHES

VARNISH COMPANY

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TO GIVE YOUR PRODUCT A GOOD START, GIVE IT AN INTERCHEMICAL FINISH!

Undercoats . . . Varnishes . . . Lacquers . . .
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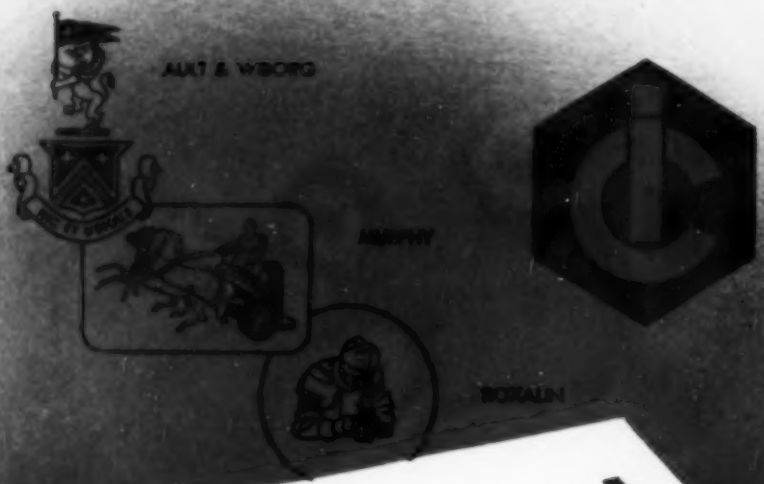


AULT & WIBORG, MURPHY, BOXALIN, AND IC ARE TRADEMARKS OF INTERCHEMICAL CORPORATION

KOCH *Industrial* NEWS

DE BURGH CONVEYORS — INDUSTRIAL OVENS — AIR MAKE-UP SYSTEMS

COSTS CUT, PRODUCTION INCREASED, BY KOCH METAL FINISHING SYSTEMS

Spray booth, air make-up room and baking oven in a modern KOCH finishing system. Parts travel directly from the spray booth at right to the oven in rear. An efficient air make-up system supplies plenty of clean, filtered air to prevent factory dirt and dust from marring the finish, also contributes to the comfort of the workers and assures a high quality finish.

The experience and skill of KOCH engineers is being called on daily to solve problems of higher quality finishes, stepped-up production, dust elimination, more accurate control, and increased efficiency.

With design, engineering, fabrication and installation under a single unified organization operating on a nation-wide basis, complete satisfaction and continued dependable performance are assured.

KOCH engineers have designed efficient finishing systems for factories employing a mere handful of men, as well as many of the largest manufacturers in the country.

An appraisal of the finishing needs of any manufacturer is available from the home office, or either of these branches:

New York, William Printz Co., 338 Fifth Avenue; Chicago, Koch Industrial Equipment Co., 53 West Jackson Boulevard; Los Angeles, Industrial Systems Co., 341 South Central Avenue.

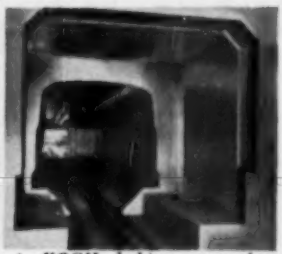
LEADING INDUSTRIES SPECIFY KOCH ENGINEERING SKILL AND EQUIPMENT

Specified by leaders in many industries, for almost innumerable applications, KOCH Industrial Equipment includes —

- Synthetic Enamel Finishing Systems
- Air Make-Up Systems
- Cleaning and Bonderizing Installations
- Spray Systems
- Conveyorized Wood Furniture Finishing Systems
- Cabinet Ovens
- Truck Type Ovens
- Custom Built Ovens

A phone call, wire or letter to the nearest KOCH office will bring complete information without obligation.

Interior of a large downdraft spray booth designed and installed by GEORGE KOCH SONS, Inc. Note automatic conveyor and excellent illumination.



A KOCH baking oven for automobile bodies. The close-fitting silhouette and heat-seal entrance in foreground assure maintenance of required temperature.

GEORGE KOCH SONS, Inc. EVANSVILLE 4, INDIANA

IF IT'S TRUE "HOT LACQUER" ...IT'S BROLITE!

★ ONE COAT OF *TRUE* "HOT LACQUER" BUILDS BETTER, RUBS MORE BEAUTIFULLY, AND LASTS FAR LONGER THAN TWO OR THREE COLD COATS.

PHONE TODAY AND GET FULL INFORMATION ABOUT THIS GREAT TIME AND MATERIAL SAVING PRODUCT.

ANDREW BROWN COMPANY

Phone the nearest factory today...in MARYLAND ask for LAUREL exchange.
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Industrial FINISHING

W. H. ROHR, Editor P. C. BARDIN, Associate Editor

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MARCH, 1950
Vol. XXVI, No. 5

ABC

...tributed monthly to finishing ...n and paint shop foremen, ...duction superintendents, ...ists, purchasing agents and ...pany executives of industrial ...nts where production cleaning ...d finishing are major opera... ...s in the manufacture of parts ...d products.

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26 TWENTY-SIXTH YEAR OF PUBLICATION

Summer Furniture Market will be held at the Furniture Mart in Chicago October 23 through October 28, according to Robert Fricks, Jr., president of the National Association of Summer Furniture Manufacturers.

There is a good and logical reason for holding this market three months in advance of the regular market, so that orders may be filled and shipment made by early Spring.

* * *

New Office Furniture developed by E. I. DuPont de Nemours & Co. is unique in that units carry their own partitions for privacy. Private offices may be set up singly or in groups in any open area. Du Pont has granted royalty free, non-exclusive license to seven companies to manufacture this functional office furniture.

These units may be used to good advantage in the factory where noise and traffic are a problem. Partitions are 6-ft. to 7-ft. high, made of glass, plywood or acoustically treated materials, whichever is suited to the particular installation. In the event it becomes desirable to move the "office", the partition moves with the L-shape desk, filing cabinet or shelves.

* * *

A New Fiber has been developed which promises to take an important place in industry. It is called "Dynel". The name denotes acrylo-nitrilevinyl chloride staple, to distinguish it from the older vinyon yarns. This yarn is said to have high resilience, warmth, strength and moth proofness. It is also fire-resistant and is inert to fungus growth. Fabrics made from dynel will char but will not burn.

* * *

New Tank Lid that need not be removed during operations has been developed for acid baths or any solution that is weakened by evaporation. It consists of a multitude of plastic beads which float on top of the liquids. Objects may be dipped in the solution through the beads, and if it is necessary to drain the tank, just skim off the bead-lid for reuse. Beads are made of Bakelite polyethylene plastic.

* * *

Fungi Proof Enamel has been developed. This is a high gloss enamel formulated to control mold and mildew growths. It comes in several colors.

* * *

Pure Liquid Rubber. H. V. Hardman Co., Inc., Belleville, N. J., announces the first known commercial production of 100% rubber in flowable form. Known under the trade-mark of DPR, the Hardman Depolymerized Rubber is expected to have wide impact on a number of industries. DPR is actually all natural crude rubber solids, containing no solvent or anything other than the rubber itself.

Although the potentialities of DPR have barely been exploited because of its recent introduction, it is already being used in adhesive formulations, conductive rubbers and as a plasticizer

(Continued on page 7)

Dolan's 35% HI-SOLIDS LACQUER

. . . sprays right from the drum: requires no thinning or heating. 35% solids in a single application.

OUTSTANDING!!

. . . Because it can be sprayed without the addition of thinners or the necessity of pre-heating to bring down to spraying viscosity, Dolan's 35% Hi-Solids Lacquer gives an improved finish at greatly reduced cost. It is unusually tough, with exceptional cold check resistance. Very light in color. Fits into any finishing schedule. A demonstration will prove convincing. Write us for 5 gallons at drum price!

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NON-INFLAMMABLE NON INJURIOUS

Fastest selling cold stripper in America. Thousands of satisfied users in the industrial field.

FASTER IN ACTION — LOWER IN PRICE

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A Quick, Smooth, Uniform coating — assured by

BARRETT GALVANIZING AND HOT TINNING CENTRIFUGALS

BARRETT CENTRIFUGAL GALVANIZER is driven with high torque head and has an equalized disc brake for quick stop.

With the Barrett Whizo Galvanizer, excess metal is quickly removed from small parts after dipping in molten metal, in fact, much faster and more uniform production is assured. Parts will also pass the most rigid inspection for quality.

The method of handling is simple and easy. Work to be coated is placed in a round basket and submerged in molten metal. When thoroughly heated, the basket is placed in the Barrett Centrifugal to be immediately accelerated to high speed, the excess metal being thrown off before it can cool.

A quick pick up and stop (from 2 to 3 seconds each) assures maximum production with an even thickness of coating.

Machines furnished with or without heated surrounding drum, in capacities from 40 to 240 loads per hour, handling from 5 to 100 lb. loads. When used for tinning threaded work, rethreading has been found to be unnecessary.

Barrett Centrifugals are used extensively, combine speed with convenience of operation and the utmost in safety. They are highly developed to meet all reasonable requirements, have self-contained motor drive and occupy a minimum of floor space.

Send at once for full details of Barrett Centrifugal Galvanizer

THE LEON J. BARRETT COMPANY

Designers and Builders of Centrifugal Machinery

1703 GRAFTON ROAD WORCESTER 1, MASS.

for crude rubber and synthetics. It is used to rubberize resins, where it imparts rubber-like characteristics to the resin. Experimentation is under way in many of the fields which will benefit from the advantages of a flowable rubber of low viscosity that does not require the use of solvents.

* * *

Corrugated Floor Mat is available for use around dip tanks, or in areas where moisture, acids or abrasives are present. It is made of compounded rubber links woven on 12-gauge spring steel. It prevents slipping and reduces worker fatigue.

* * *

Venetian Blinds are really going places. There are many improvements as well as new designs. Outstanding are the decorated slats with the decor suitable for the room in which they will be used. For instance, for the nursery there are animal characters painted on blue and pink slats; for the kitchen, utensils and tiny flowers in black or red on white, or black on yellow slats; wood grain finished in dark or limed tones for library or den.

The first is a silk-screen repeat job, and the latter, transfer of wood grain by the copper plate and roller method. A clear, top protective coat is applied. Just another step in the finisher's art. They are called Beauflex blinds.

Another new design is an aluminum slat blind made in two sections so that the top and bottom sections may be operated independently (or together) for light or ventilation with privacy. No cords or tapes are used. They operate by four small control knobs. They are called Visualite blinds.

Then there are the blinds with vertical slats, the newest of which has vertical cloth vanes in washable faille. They are controlled by cords so that half the slats may be drawn to either

The Hoover Company

LIKES LACQUER BEST BECAUSE...

. . . lacquer air-dries rapidly . . . helps The Hoover Company make production time on two of its tank-type cleaner accessories.

Transparent lacquer coats inside and out The Hoover Company's nickel plated steel extension tubes . . . protects surfaces from corrosion . . . keeps them dollar-bright, lessens smudging.

Pigmented lacquer coats the Hoover crevice tool accessory, since it meets all specifications for hardness, durability and looks.

HERCULES POWDER COMPANY
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HERCULES DOES NOT MANUFACTURE LACQUERS, ONLY THE DERIVATIVES FROM WHICH THEY ARE MADE.

LACQUER HELPS YOU SELL

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Remove Finishes with SAF-TE

No risk of fire!

Where fire prevention and a quick, clean removing job are "musts"—SAF-TE is the first choice. Approved by U. S. Dept. of Commerce as "ship stores," SAF-TE *will not burn!* Reduces paint, varnish, enamel, lacquer, shellac or synthetics to a soft, buttery sludge that comes off readily. Leaves no waxy residue; therefore requires no after-wash.

GET OUR RECOMMENDATIONS

During 35 years of serving leading industrial firms, we have developed removers to meet every need. Let us help you with your removing problem. Fill in coupon below.

WILSON-IMPERIAL CO.
125 Chestnut Street
Newark 5, N. J.

WILSON-IMPERIAL CO.,
125 Chestnut St., Newark 5, N. J.
We are interested in stripping finishes
from.....
Type of Finish.....
Name.....
Company.....
Street.....
City.....State.....

side of the window, or all of the slats to one side. Vanes are easily removed for laundering. These are known as the Wright blinds.

Another vertical slat blind, called Sun Vertikal has acetate rayon panels operated by a control rod. They are available in many colors, and in 2-tone effects which simulate curtains and drapes.

* * *

Insulating Tape which eliminates three materials has been developed. For wiring jobs it was formerly necessary to use a rubber tape, a friction tape and shellac. The new tape combines the insulation of rubber and the mechanical protection of friction tape. It is made with vinyl plastic backing and is proof against oil, acids, alkalis and alcohol.

* * *

Magnetic Index Cards. Did you ever have trouble plowing through a drawer of index cards? To eliminate this and to speed the operation, a system has been introduced employing magnetism which holds each card uniformly apart so that each may be read without thumbing through them. Sounds like a good idea.

* * *

Odorless Paint for interior painting and decorating has been developed and is being marketed by a concern in Brooklyn, N.Y. The unscented characteristic is not achieved through the use of a deodorant or perfume to mask the usual discomforting fumes, but is specifically formulated and exclusively processed (after 15 years of laboratory experimenting) in order to accomplish the beneficial results.

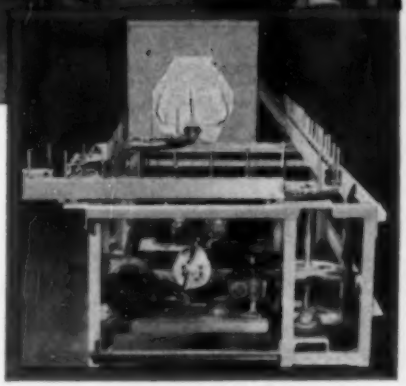
Interior painting may now be done on a year-round basis, and need not be confined to the months in which the weather permits the opening of windows for ventilation during and

(Continued on page 88)

JENSEN FINISHING SYSTEMS ARE *ECONOMY ENGINEERED* TO CUT EVERY COST CORNER

JENSEN ECONOMY ENGINEERING INCREASED PRODUCTION 100%

In this flexible "L" shaped unit, 1½ to 2 min. baking time at conveyor speed of 22½ ft. per. min., permits finishing 2700 pcs. per hr. Revolving spindles on 6" centers, rotate parts 10 times in single pass through automatic spray of synthetic black lacquer—are driven By separate drive unit apart from conveyor.



Manufacturing breather caps for oil filler pipes was nothing new for this manufacturer—he'd been doing it for years—had even rigged up an infrared oven of sorts which did a "good enough" job of baking a final finish. That was before production demands doubled, finish specifications became more critical and sizes began varying.

The only available space for more finishing facilities was a corner going around other equipment. Jensen engineering ingenuity gained through years of radiant heating and conveying experience answered the problem with this completely mechanized, *coordinated* Jensen Finishing System . . . *economy engineered* to cut every cost corner.

YOU TOO, CAN CUT COST CORNERS *and profit by having Jensen plan and construct your finishing system. You get space-saving lay-out, efficient conveying coordinated with proper radiant heating equipment . . . better, faster finishing at less cost!*

Jensen SPECIALTIES INCORPORATED

● Representatives in Principal Cities

9331 FREELAND AVENUE • DETROIT 28, MICHIGAN

MANUFACTURERS OF *ECONOMY-ENGINEERED* RADIANT HEAT EQUIPMENT

"DUAL HEAT" INFRARED OVENS • CONVEYORS • PAINT DIP TANKS

SLASH MAINTENANCE COSTS!

by using

PLASCOTE NO. 1

The new peelable plastic boothcoating.

- Actual using reports prove Plascote No. 1 will cut booth cleaning time in half.
- It is applied quickly and easily by use of ordinary paint spray equipment, or by brushing.
- Shipped ready to apply, no pre-mixing necessary.
- Inflammable over-sprayed paints may be peeled from the spray booth walls in large sheets.
- Economical to use due to extensive coverage per gallon.

TEST SAMPLE OFFER:

Order 5 gallons at the drum price of $1.95 per gallon.

CHEMCO PRODUCTS COMPANY, Inc.

7740 WEST 47TH STREET LYONS, ILLINOIS

Your Signal! **9-8-7-0**

CLEAR METAL LACQUER

For

silver, cadmium, zinc, copper, brass, aluminum.

OUTSTANDING

1. Adhesion to metal surfaces
2. Resistance to sulfur tarnish
3. Resistance to oxidation
4. Resistance to perspiration
5. Resistance to abrasion

Pale in color. Takes 100-200% reduction. Dries under 15 minutes.
A premium product — priced at ordinary lacquer levels.

THE VARNISH PRODUCTS COMPANY

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CLEVELAND, OHIO

HOOVER SAYS...

"SPECTACULAR"

The Hoover Company, world-known for quality electric cleaners, reports on Electrostatic Spray:

"To maintain the quality standards of our wrinkle finish with hand spray, most of the time only 75% of our production would pass our inspection.

"Now Electrostatic Spray produces superior quality wrinkle coatings on almost 100%."

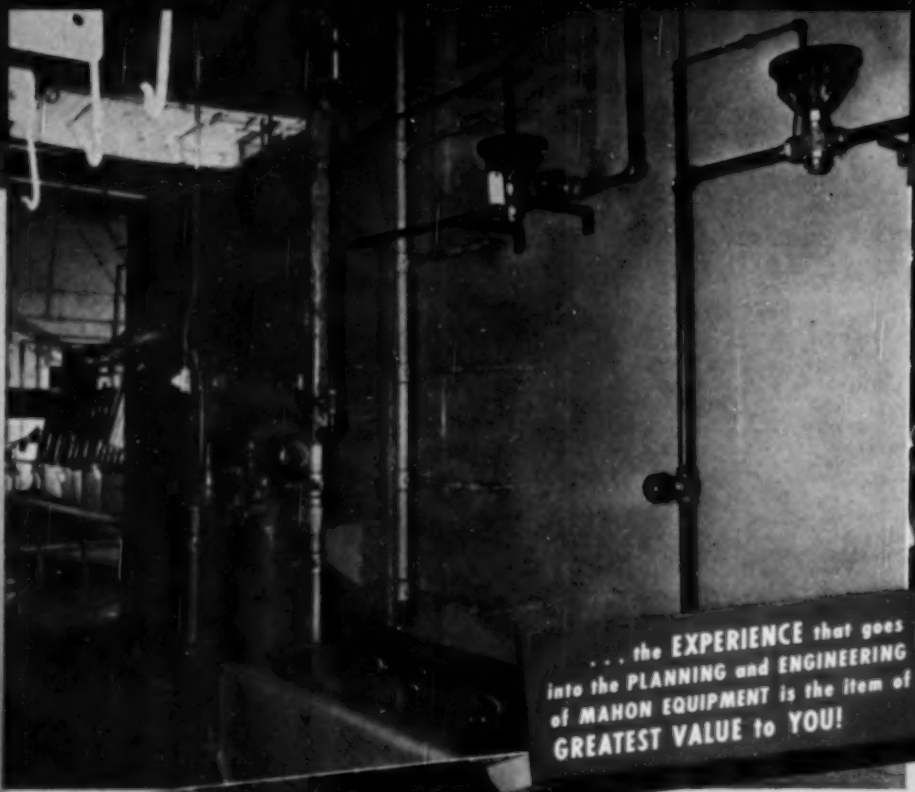
Avail yourself of Electrostatic Spray's uniformity and efficiency. Write today for helpful literature showing how you can improve quality and save 40 to 60 percent on coating materials.

RANSBURG

RANSBURG ELECTRO-COATING CORP.

Indianapolis 7, Indiana

COMPLE



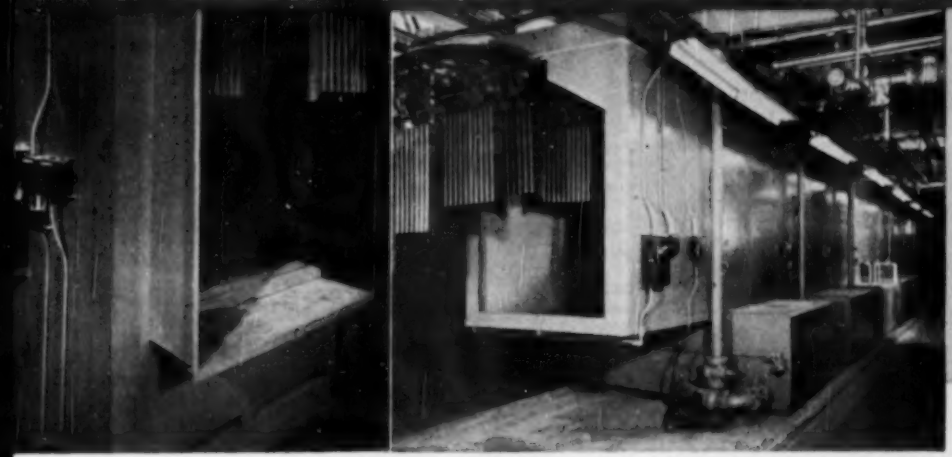
. . . the EXPERIENCE that goes into the PLANNING and ENGINEERING of MAHON EQUIPMENT is the item of GREATEST VALUE to YOU!

Illustrations from Right to Left: Parts of Plate-Type Condensers entering the Mahon Five-Stage Metal Cleaning and Rust Proofing Machine—first phase of the Finishing Process. Parts emerging from Mahon Dry-Off Oven. Parts emerging from Mahon Flow Coating Machine and moving on to Finish Baking Oven. Entrance and Exit end of Mahon Finish Baking Oven—the final phase of the Finishing Process.

M

SYSTEMS

. . . for ENAMELS • LACQUER • PAINT • VARNISH



Progressive Manufacturers Demand Modern Finishing Equipment to Provide a FINER, MORE DURABLE FINISH at LOWER COST!

On these pages, Mahon is pleased to illustrate the major units of a complete finishing system designed to process Plate-Type Condensers. It is installed in the plant of the North Chicago Division of the Houdaille-Hershey Corporation. Like all Mahon installations, this system was specially planned and engineered to do a specific job with utmost efficiency and economy. The complete system includes a five-stage Metal Cleaning and Rust Proofing Machine, a Dry-Off Oven, a Flow Coating Machine, and a Finish Baking Oven. Each phase of the finishing processes is coordinated and engineered into a continuous production line geared to meet the specific requirements of the manufacturer. This is another typical example of good planning and good engineering in modern production equipment designed to improve product finish and reduce costs. If you have a finishing problem, or are contemplating new finishing equipment, remember that the Mahon organization has pioneered development in this highly specialized field for thirty years . . . broad experience, in every industry where finishing constitutes a major production operation, plus constant research and experimentation, has endowed Mahon engineers with a wealth of technical knowledge and practical know-how not available to you elsewhere. See Mahon's Insert in Sweet's Mech. Ind. File, or write for Catalog A-649

THE R. C. MAHON COMPANY

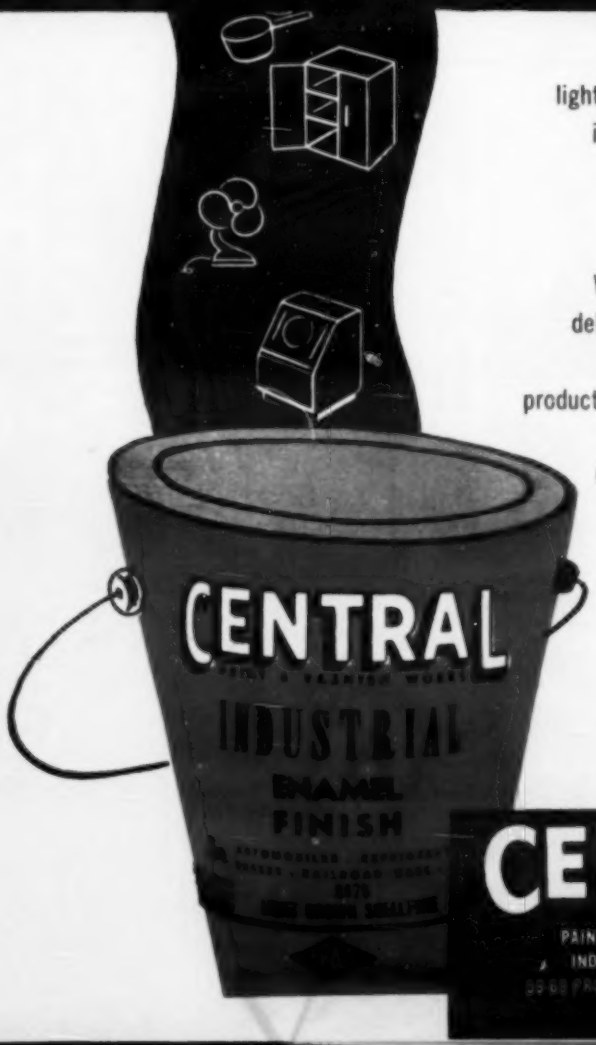
HOME OFFICE and PLANT, Detroit 11, Mich. • WESTERN SALES DIVISION, Chicago 4, Ill.

Engineers and Manufacturers of Complete Finishing Systems—including Pickling Equipment, Metal Cleaning and Rust Proofing Equipment, Dry-Off Ovens, Hydro-Filter Spray Booths, Filtered Air Supply Systems, and Drying and Baking Ovens. Also Core Ovens, Hydro-Foam Dust Collectors, and many other Units of Special Production Equipment.

AHON

You've invested a tremendous amount of materials, manpower and money in your product — not to mention years of engineering.

To do that product justice, you want a finish that's **custom tailored** for maximum wear and efficiency.



For years Central Paint has been manufacturing just such finishes, as anyone in the kitchen cabinet, fluorescent lighting stripping, kitchenware, oil burner jacket, and wire cloth industries will tell you. By concentrating on the specialized problems in each industry, Central Paint has become a recognized efficiency-leader in certain fields.

Well, we're ready to expand a little now and we believe we can deliver the same top quality service to **your industry.** We can develop finishes that will perform under the precise conditions your product has to contend with — weather, wear, dampness, heat or cold.

Our highly concentrated enamels will also save you money by yielding **greater mileage.** You'll find that Central Paint's Industrial Finishes are more economical in the long run because they're the best quality that money can buy.

So write to the Industrial Finishes Division of Central Paint today for help in your paint problems.
That's our business and we're good at it.

MULTI-PURPOSE

NEW TYPE COATING

1. Prolongs product life

2. Cuts structural maintenance costs

Rust-Chek

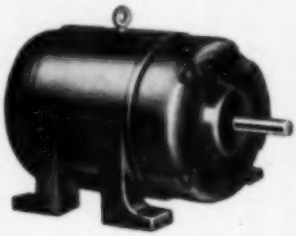
COATING

resists water, salt and fumes

Originally developed, on special request, to stop excessive corrosion of railway track in tunnels, this new type coating is finding ever broadening acceptance as both a product undercoat and for maintenance painting as a 2-coat operation.

Rust-Chek has exceptional resistance to water, salt and acid fumes; retains, through long years of service, unusual qualities of flexibility and adhesion that definitely prevent chipping, cracking or peeling.

Investigate now! Skilled Rinshed-Mason engineers to help you!



For PRODUCT UNDERCOATS

Corrosion-resistant, tough and durable, Rust-Chek is highly recommended as a product undercoat, and especially if the product will ultimately be subjected, in use, to corrosive atmospheres and moisture. *May also be used as a finish coat if high gloss and special coloring are not required.*

For STRUCTURAL STEEL

Bridges or factory structural steel work can be quickly and easily coated with Rust-Chek, adding countless years of life and greatly lengthening time between coats. Rust-Chek puts up a solid front against salt spray, fumes from processing equipment, etc.

Write for DESCRIPTIVE FOLDER

Free Descriptive Folder and specifications will be sent you on request. Test sample will also be forwarded if wanted.

RINSHED-MASON CO.

5935-71 MILFORD AVE., DETROIT 10, MICH.

Schmieg CENTRI MERGE WASHERS

FIRST *Step* • FIRST *Choice* • *In* FINISHING

You start right when you call upon Schmieg engineers for mechanical washers to fit your specific production requirements. And that's why you finish right, too. Because Schmieg washers are designed and engineered to give you high production cleaning, long trouble-free performance at low operating cost.

There's a Schmieg washer for any kind of job, a washer that will save floor space and can probably be loaded and unloaded by one man. Available in manual and automatically loaded types.

Convenience is emphasized in Schmieg washers, no matter what type—convenient controls, variable speed drives, doors that permit quick access to interiors for ease of maintenance.

No wonder Schmieg washers are first step and first choice in finishing!

Start right now by consulting Schmieg engineers for your washing requirements.

THE AIR PURGE IS CENTRI MERGE

Schmieg INDUSTRIES INC.

Engineers & Manufacturers

312 PROJECTILE AVENUE • DETROIT 2, MICHIGAN

file cases

Read the story of the Tousey Varnish Co. A copy of our new book "65 YEARS OF ACHIEVEMENT" is yours for the asking.

The finish on an office file case is exposed to many kinds of abuses. Acid from the hands, abrasion from dust and files, friction from sliding drawers, heat from a poorly placed steam pipe.

A paint, to hold up under such conditions, must necessarily be a good one. Such a finish has been developed by Tousey, and successfully used by office equipment manufacturers.

If your finishing problem is one where office equipment is concerned, a post card or letter will bring you helpful information.

TOUSEY FINISHES CAN TAKE IT!

TOUSEY PRODUCTS

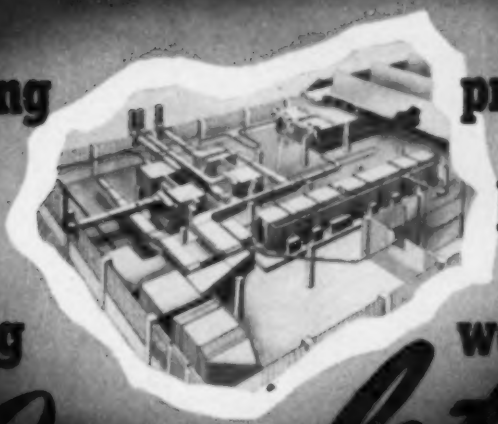
DURACOTE for DURABILITY

TOUSEY VARNISH CO.

520 WEST 25TH STREET • CHICAGO 16, ILLINOIS

spray painting

rust proofing



flo-coating

baking

washing

Complete finishing systems

We specialize in EXPERIENCE . . . 31 years of building equipment for Production Finishes . . . assures the UTMOST in Design, Fabrication and Installation.

If YOU are interested in Low-Production Costs, Sales-Appeal Finish and Uninterrupted Production, *feel free to call, wire or phone,*

For Finer Finishing Equipment — In Any Industry — It's

PETERS-DALTON *Inc.*

SPEED-WHIRL

"Haw! Too slippery for you, eh?"

To get a finish on a product and make it stick can be quite a problem at times. On mirror-bright chromium plate, for example.

A manufacturer was faced with that problem on chromium plated refrigerator shelves. And he asked Unichrome engineers to see what they could do.

Neglecting not one single requirement of shelf service, they formulated a Unichrome finish that gave him clarity, resistance to humidity, food chemicals, abrasion—as well as remarkable adhesion to chromium. Today, it is one of the most popular and widely-used finishes for chromium shelves!

Would you like to try out our thinking on *your* problem? Write us about it.

Remember—a "fresh viewpoint" often works wonders!

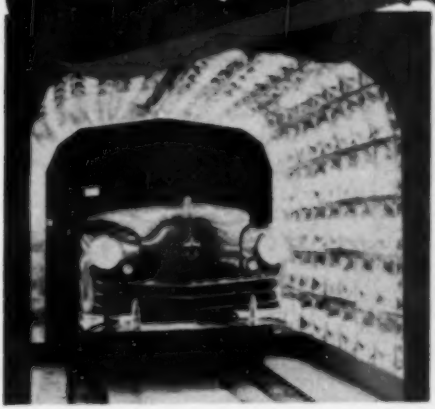
UNICHROME

LACQUERS, SYNTHETICS, BAKING ENAMELS

Products of the Organic Coatings Division of UNITED CHROMIUM, Incorporated
51 East 42nd Street, New York 17, N.Y.

IS YOUR HEATING METHOD OBSOLETE ?

Compare the Amazing Efficiency of Evenray Infra-red



Crosley Motors uses Fostoria Evenray to dry colored touch-up lacquer on finished cars on the repair line. Drying time is 1¾ minutes. 32 KW oven with 275 watt lamps.

General Porcelain Enameling & Mfg. Co., Chicago, remove moisture from frit on metal signs with Fostoria Evenray. Completely dried in 12 minutes. Oven is 7'4" long, equipped with 500 watt lamps.

The Infra-red process is now widely accepted and used throughout industry because, in comparison to older heating methods, Infra-red is the *fastest, most efficient, most flexible.* These time-saving, cost-saving, production improvement advantages have increased profits for the thousands of plants using Infra-red systems engineered by Fostoria. A Fostoria Evenray System will outperform any other Infra-red equipment on the market today. Properly engineered equipment is essential to obtain the many new advantages of Infra-red for your production. A Fostoria engineer will gladly analyze and forecast accurately the benefits of Infra-red for your special use. Request this service without obligation, today.

THE FOSTORIA PRESSED STEEL CORPORATION FOSTORIA, OHIO

EVENRAY SYSTEM

Fostoria

FOR BAKING • DRYING • PREHEATING • DEHYDRATING

GET FULL FACTS

Technical information and literature available on request. WRITE, NOW. Learn how Evenray can aid your production.

Greater Beauty and Durability of

PITTSBURGH LAVAX ENAMELS

add to Sales Appeal of Millions of Fine Home Appliances

IT is not surprising that many leading manufacturers of refrigerators, washing machines, hot-water heaters, kitchen cabinets and other household appliances use famous Pittsburgh Industrial Finishes.

By working closely with the engineering and technical staffs of these organizations, Pittsburgh has produced tailor-made Industrial Whites of outstanding quality and performance to meet their needs and performance standards.

These coatings have the smoothness and opacity desired for the various kinds of appliances. They adhere well and attain the desired hardness under specified baking schedules. They resist grease and humidity. They hold their initial gloss and color through many years of service.

As a result, these Pittsburgh Finishes not only add to the eye appeal of the appliances on the salesroom floor but also keep them looking better longer in the homes of their purchasers.

Such cooperation with the appliance manufacturers is just another example of the valuable assistance Pittsburgh has been giving to users of industrial finishes in many fields. This understanding of finishing problems, based on practical experience, can be helpful to you. Call on us for facts and figures.

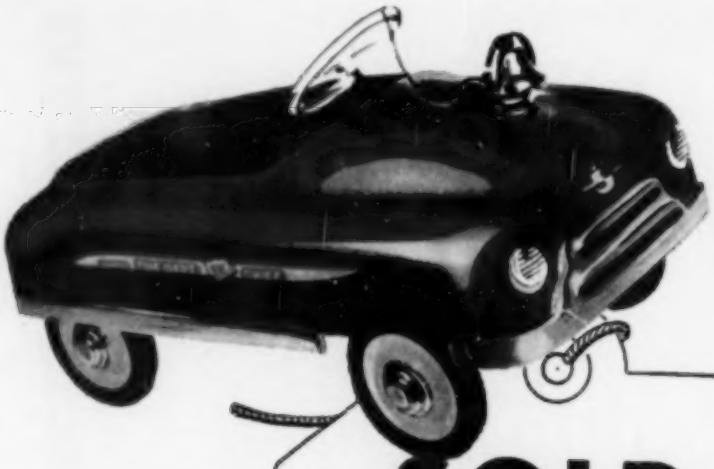
PITTSBURGH PLATE GLASS COMPANY
Industrial Paint Division, Pittsburgh, Pa.

Factories: Milwaukee, Wis.; Newark, N. J.; Springdale, Pa.; Houston, Texas; Los Angeles, Calif.; Portland, Ore. Ditzler Color Division, Detroit, Mich. The Thresher Paint & Varnish Co., Dayton, Ohio. Forbes Finishes Division, Cleveland, Ohio. M. B. Suydam Division, Pittsburgh, Pa.

PITTSBURGH *Industrial* FINISHES

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY



SOLD

To: *Billy Willis, jr., Everytown, USA*

By: *Toys Incorporated, Everytown, USA*

Sale Conditions: *Buyer instantly attracted by brilliant, hard enamel finish. Approved by W. T. Willis, Sr.*

Maker: *BMC Manufacturing Corporation, 5 Griswold St., Binghamton, N. Y.*

Credit: *Kirker Chemical Co., 1 East 11th, Paterson, N. J., maker of superior custom industrial finishes.*

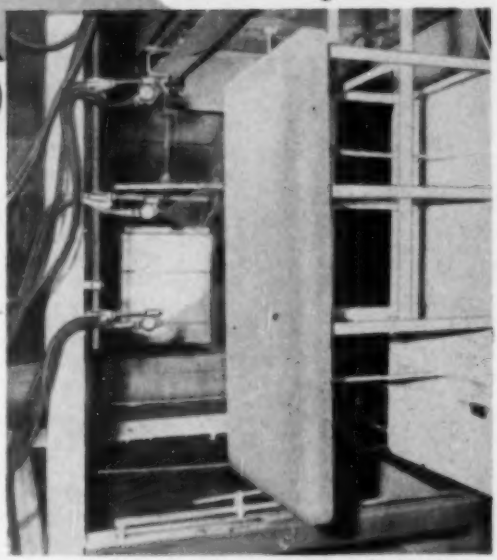
Remarks: *YOUR product, too, will move faster under a Kirker finish. Recommendations gladly, on request.*

Now It's A Breeze TO WATER WASH AN AUTOMATIC SPRAY

with a

DESPATCH

Uniform Velocity SPRAY BOOTH



Stratification and air turbulence are eliminated in this booth designed for electrostatic and other low pressure automatic spraying. Make-up air distributed evenly through filters covering entire back wall and air outlets at four levels across the front curtain provide uniform air movement over entire face of the booth. This uniform air flow and low pressure spraying through an electrostatic field reduces paint losses. Filtered air in conveyor vestibules provides effective seals against factory air and dirt. Water up to 50 gals. per minute per lineal foot applied to the split curtain minimizes paint accumulation. Splashing is eliminated by a specially designed wet splash guard. Water flowing over the booth-floor collects overspray and carries it to settling tanks for recovery. Pictured is the prime coat booth in the Seeger Refrigerator Plant, St. Paul, Minn.

Water wash spray booths for automatic or hand spraying and dry spray booths are designed for maximum efficiency and are available to any specifications. DESPATCH engineers will gladly analyze your requirements and plan, select, coordinate and install individual units or a complete finishing system.

WRITE TODAY for Bulletin 66 or request a representative to call.

Standard Despatch Water Wash Spray

DESPATCH OVEN COMPANY

Minneapolis Office: 619 S. E. 8th Street

Office: 7070 N. Clark Street

DESPATCH OVEN COMPANY

. . . . . are you
only this far away from
MORE APPLIANCE SALES?

Sales preference for *your* appliances may be only a matter of 2/1000 of an inch of thickness—the beauty and lasting quality of the finish! Buyers today have learned to expect the punishment-resisting, white-for-life characteristics made possible by the newest developments in synthetic resin finishes.

Kemclad* Appliance Finishes provide these qualities, accurately adapted to the needs of appliance manufacture. They *reduce production difficulties* (one user alone has applied over 86,000 gallons without technical or production problems) . . . *cut down rejects* (greater hardness with flexibility enables minor defects to be rubbed or "dinged" out after baking) . . . *reduce costs per unit* (high solids content with low viscosity makes finishing cost low for any given thickness of finish). Investigate—write The Sherwin-Williams Co., Industrial Division, Cleveland 1, Ohio.

*Trademark

TOUGH AND MARPROOF
Kemclad formulations include special ingredients to protect finish against marring, chipping or scratching.

HOT GREASE? NO HARM DONE!
Even hot grease won't damage Kemclad's gleaming white finish!

STAYS WHITE AND STAIN-FREE!
Kemclad Finishes aren't affected by food acids, weak alkalies, alcohols or other common household chemicals.

CLEANS EASILY . . . SAFELY!
Kemclad's smooth surface cleans easily with damp cloth, but withstands strong detergents safely.

SHERWIN-WILLIAMS KEMCLAD
APPLIANCE FINISHES
ANOTHER PRODUCT OF SHERWIN-WILLIAMS INDUSTRIAL RESEARCH

How to make *LESS PAINT* do *MORE WORK!*

AS HANDY AS YOUR TELEPHONE

Kem Lustral Enamels are stocked, ready-to-use, at your local Sherwin-Williams branch store, in 31 standard colors, plus black and white. You'll find other Industrial Finishes stocked there, too:

- LUSTRAL ENAMELS
- OPEX LACQUERS
- KEM ARTMETAL (WRINKLE) FINISHES

You'll find a quick, handy, moneysaving answer to an amazing variety of production and maintenance problems in this all-round, top-quality Industrial Enamel!

Quick, because Kem Lustral Synthetic Enamels are as handy as your phone—stocked, ready-to-use, at your local Sherwin-Williams branch store.

Handy, because you can use them almost anywhere for anything— product finishing or maintenance—inside or outside—air-dried or baked—brushed, sprayed or dipped.

Moneysaving, because they provide the same high-quality pigments and vehicles of the best special finishes obtainable, but at less cost because of large-volume production and nationwide distribution!

Call your Sherwin-Williams branch store—get acquainted with them and with this flexible, quality coating! The Sherwin-Williams Co., Industrial Division, Cleveland 1, Ohio.

Another product of Sherwin-Williams Industrial Research

SHERWIN-WILLIAMS INDUSTRIAL FINISHES

Automatic Spray Painting

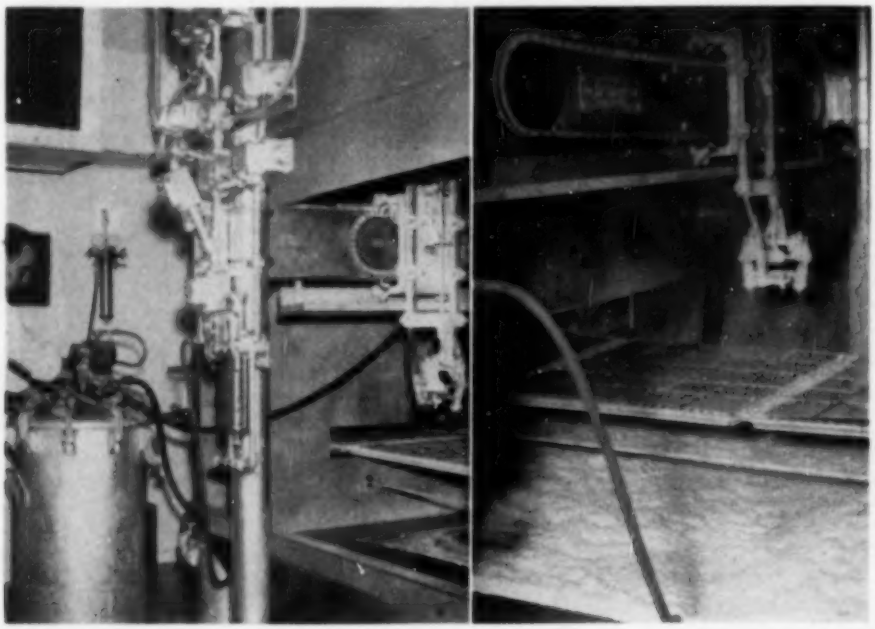
OF BAKE FINISH ON METAL WALL TILE

THERE IS MORE to finishing metal wall tiles than merely applying enamel and baking it. There is that little matter of color uniformity—and it can grow into a problem of enormous and far reaching proportions. Once a color is established in the line, such as a certain blue, green, cream or orchid, that color must remain consistently uniform for the particular run being made, and it must remain uniform for all future runs—a month or a year from now.

Customers often re-order tile to be installed in the same room, or in close proximity to the original

By E. J. RYSER

Superintendent of Cadillac Mfg. Co.



Automatic spray guns move back and forth above loaded screens of tile on cable conveyor.

tile, and if that new tile does not absolutely match the old in color, under any source of light, a serious complaint ensues. We go to great lengths to check and maintain established color uniformity in all tile produced, regardless of when it is finished.

Size of Tile; Colors; Clean Filtered Air

Metal wall tile, produced from zinc-plated steel, is made in field tile 5x5-in., half and quarter tile, stripe, base tile, outside corners, outside corner bases and outside corner stripe. We have established a variety of pastel shades for field tiles; also white and black. For trim tile there is maroon, white and black.

In finishing a product of this type, where the finish must be smooth and glass-like, dust or foreign particles must not be allowed to contact the metal during or after application of the enamel. Our entire finishing area, up to the ovens, is pressurized with filtered air; and the walls and concrete floor of the spray and distributing rooms are kept spotlessly clean.

Wall Tile Finished by Automatic Spray

Operators place 25 field tile, (or 50 half tile or 100 quarter tile) face up on an aluminum bound wire screen, and lay the screen on a horizontal double wire cable finishing conveyor. Screens are loaded previously so that they can be placed on the conveyor to form a continuous screen. This conveyor, traveling at a speed of 15-ft. per minute, carries the loaded screens into an automatic reciprocating water-curtain spray booth located in a pressurized room. Two fixed spray guns, operating with an atomizing pressure of 45-lbs. and a fluid pressure of 25-lbs., spray synthetic resin-base enamel on the tiles as they pass through the booth. The spray guns make 55 strokes per minute, or 17 passes of the guns over each screen. The four edges of each tile are beveled, and it is necessary to coat the beveled edges as well as the flat face of the tile.

Pressurized Distribution Room Makes for Flexibility

Upon leaving this spray booth, the screens are carried by cable conveyor into a distributing room which is also pressurized. Here an operator removes the loaded screens and places them on one of the four infra-red oven conveyors. Distribution is made through rather narrow slots in the wall of this room. Tiles immediately enter the infra-red ovens. Using four separate infra-red ovens in connection with the distribution room permits different temperatures and baking periods for various colors, or all of the ovens can be operated at the same temperature and conveyor speed.

Metal tiles are baked from four to six minutes at 325° F. For darker colors the fastest speed is used, while the lighter shades go through on the slowest speed. On black enameled tile, half of the infra-red lamps are cut off and the conveyor speed is maintained at the same rate used for pastel colors.

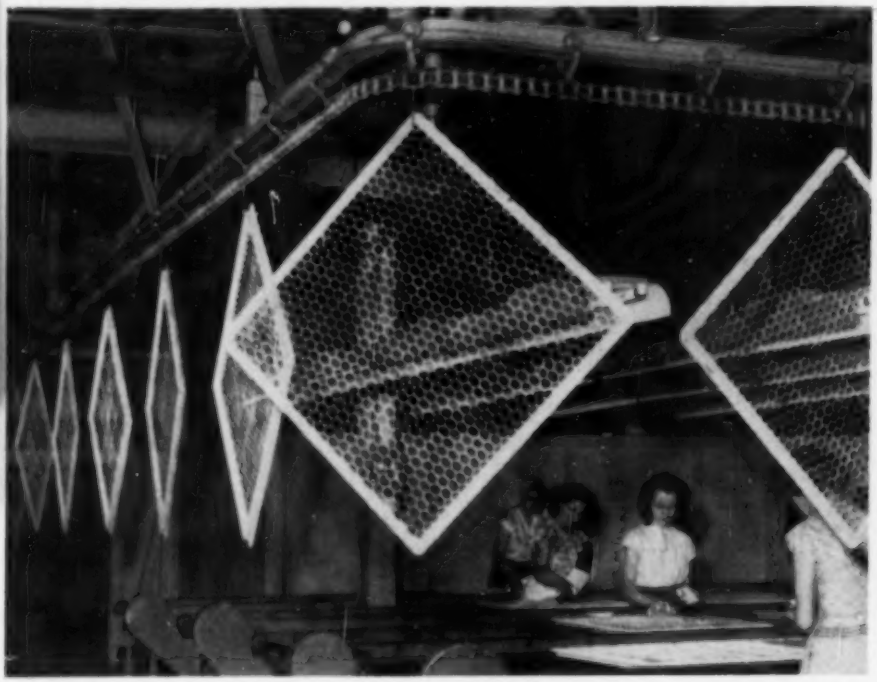
I mentioned before that absolute uniformity in finishing metal tile is a "must." A vital part of this uniformity is film thickness. We ap-

ply the enamel to a thickness of 1.4-mils. Every 15 minutes a test panel is run through the automatic spray and oven. This panel has two strips of masking tape across its face to divide it into three sections. Film thickness on these test panels is checked with a micrometer, and adjustments are made if it deviates from what is specified.

Film Thickness and Color Comparison Tests

Every 30 minutes a tile is removed from the screen after baking. It is taken into a dark room where, under a series of special lights, a color comparison test is run, using an established color panel as a standard color. Testing of film thickness and color uniformity is done by definitely specified operators who have been trained in this work. It is not left to just anyone who happens to remember that it is time to run a test. Through constant and consistent testing of film thickness and color, we are able to maintain a uniformity of product that extends throughout the years.

As tiles leave the ovens they are cooled as they travel about 20-ft. farther on the wire mesh belt. Cool air is blown on the under side of the screens from a duct which ex-



These aluminum-bound wire screens, which support tile on cable conveyor, as they pass through automatic spray and infra-red oven, are being returned for re-loading by overhead chain conveyor. Photograph, courtesy of Jensen Specialties, Inc.

CLINCO
Top quality
industrial lacquers
and enamels
The Sign of
CLINCO
Highest Quality
CLINCO
INDUSTRIAL
FINISHES
THE CLINTON COMPANY
THE CLINTON COMPANY
1210 ELSTON AVE. • CHICAGO 22, ILLINOIS

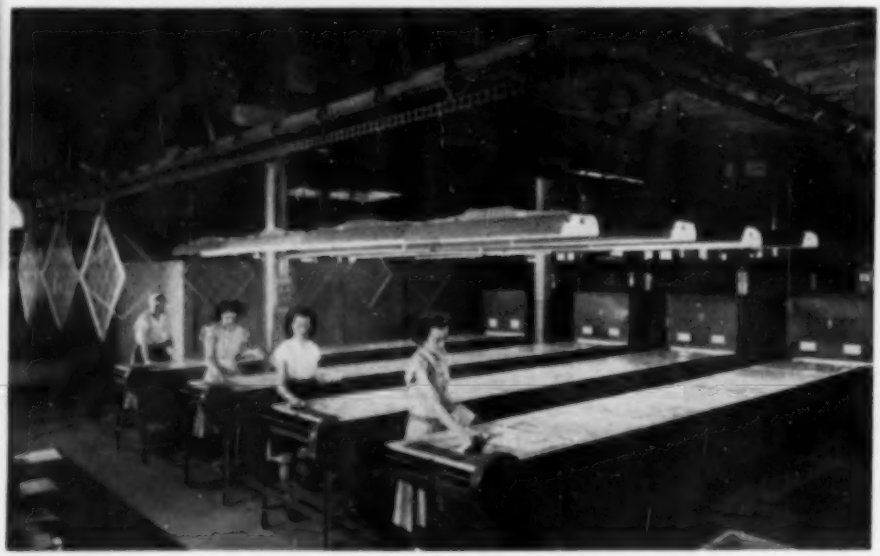
tends across the entire width and length of this conveyor extension. At the end of this conveyor tiles are removed from the screens, inspected and packed for shipment.

Conveyors and Screens Are Cleaned Regularly

As tiles are removed from the screens, the empty screens are hung to an overhead monorail conveyor to be returned for reloading. Once a week all aluminum-bound wire screens are cleaned by soaking them overnight in a stripper tank and then rinsing them. The solution used in this tank does not attack the aluminum. We use aluminum-bound screen because of its light weight which facilitates handling and speeds up the operation. Conveyor cables that carry screens through the automatic spray booth are also cleaned weekly, and are then given a heavy coat of cup grease which aids in the cleaning operation. These cables do not enter the infra-red ovens.

Paint Storage; Agitators; Pressure Tanks

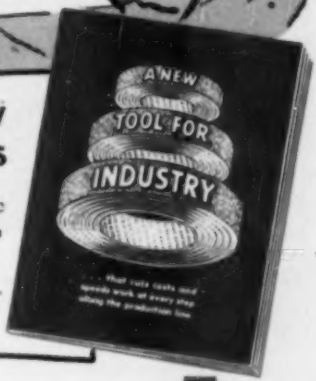
Just off the finishing room is located an adequate paint storage room equipped with mechanical agitators. Here the 30-gal. pressure tanks are filled in advance. Color changes in the booth can be quickly made by cleaning the guns and material hose, and wheeling the new color enamel in a pressure tank into place. The paint supply room is maintained under a uniformly warm temperature so that the enamel is always ready for use.



Exit end of four infra-red ovens. Tiles are cooled by forced air as they travel to the unloading station. The overhead chain conveyor returns empty screens to the loading end of automatic spray conveyor. Photograph, courtesy Jensen Specialties, Inc.

HOW TAPE Saves Time, Cuts Costs IN INDUSTRIAL FINISHING...

TAPED EDGE OF METAL RADIO CHASSIS — DURING SPRAY PAINTING — INSURES CLEAN ELECTRICAL GROUNDING ON FINISHED JOB. **PERMACEL** STICKS AT A TOUCH — STRIPS OFF CLEANLY!



FREE BOOKLET SHOWS HOW TAPE CAN HELP IN YOUR BUSINESS

Twelve pages of facts, figures and pictures! Write today—on your business letterhead, please—to Dept. 1M at the address below for your copy.

PERMACEL *offers a complete line of laboratory-developed, job-tested industrial tapes.*

Permacel®

INDUSTRIAL TAPES

INDUSTRIAL TAPE CORPORATION • NEW BRUNSWICK, N. J.

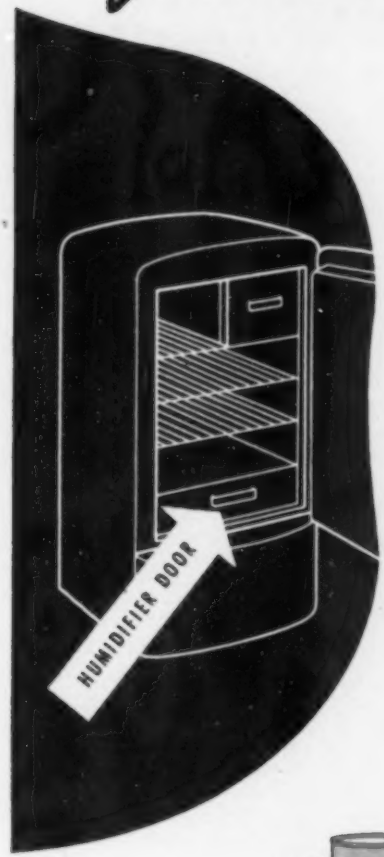
NEW LOWE BROTHERS

✻ Lowe Brothers new *Lacquer Finish* overcomes the many finishing problems that have long hindered plastic product manufacturers. It is the ideal finish for all kinds of plastic equipment, utensils and novelties where color and lasting attractiveness are desired. Remember—it matters not *what you* manufacture, Lowe Brothers may have the scientific answers to your finishing requirements or problems.

This advertisement is based on facts from the Lowe Brothers Case History Files.

LACQUER FINISH

solves Polystyrene finishing problems!



When a large refrigerator manufacturer was recently faced with the difficulties of finishing a polystyrene humidifier door, counsel with a Lowe Brothers "Finishing Specialist" led to the development of a new product—Lowe Brothers *Lacquer Finish*—which solves *all* the old problems of finishing plastic products!

The humidifier door required a finish that would *adhere* to polystyrene, yet, would not etch the surface—one that would stand up under conditions of constant humidity, resist foods, greases, juices and soaps. *This Finish* answers every requisite. Moreover, it can be made in *any* color; sprays on easily; dries in 10 minutes (quicker still if force dried) to a good, smooth gloss. From every standpoint, new *Lacquer Finish* is both practical and economical in use!

Development of this new finish provides a perfect example of the way manufacturers *everywhere* are benefiting by the services and suggestions of Lowe Brothers "Finishing Specialists." Their thorough knowledge of finishing methods and materials may lead to better finishing *results* for *you*. Why not talk it over? No cost or obligation. Write today.

THE LOWE BROTHERS COMPANY • DAYTON 2, OHIO

LEADERSHIP THROUGH CONSISTENT SERVICE

Lowe Brothers
FINISHES FOR INDUSTRY

PAINTING COIL SPRINGS IN Centrifugal Machines

By DAN CHIEGER, *Chief Metallurgist*
*L. A. Young Spring & Wire Corporation**

THERE ARE MANY different kinds of coil springs, made in a wide range of wire gauges. However, they may be classified under two general types—compression and extension. Practically all coil springs require a finish coat of some kind. In some cases customers specify the type of cleaning and surface preparation, as well as the type and color of coating desired to meet the requirements demanded by the end use of their springs.

Cleaning and Coating Valve Springs

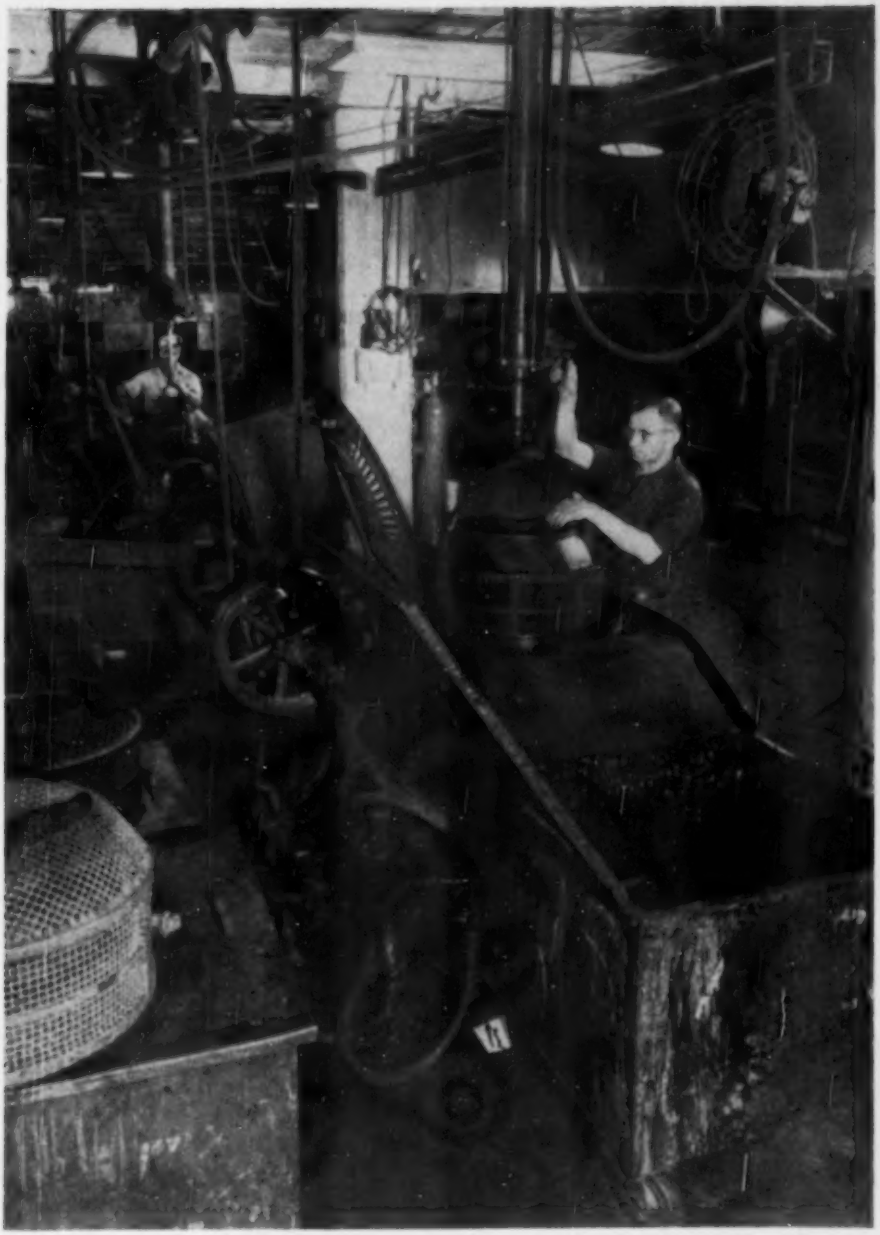
Let us consider, for example, valve springs used in automobile engines. These springs are not rust proofed; in fact, they do not receive any ordinary metal washing operations. Springs coming from the fabrication department are put through a shot-blast machine to remove grease, and to peen the metal to increase the life of the spring. Then each spring is load-tested to find out if it meets specifications.

Springs that test satisfactorily are placed on a moving belt conveyor which carries them up to ceiling height and drops them into bins from which they are collected for painting. From the sliding doors of these elevated bins, perforated metal work baskets are filled. Each basket will hold from 500 to 800 springs, depending upon the size of the springs.

An operator raises the loaded basket by means of an electric hoist and lowers it into a portable dip tank which is placed close to a centrifugal machine. The basket of dip-coated springs is raised and allowed to drain a few seconds over the tank; then it is lowered into the centrifugal machine, the lid is closed, and the work basket is spun clockwise for two minutes at 750-rpm. to throw off excess paint from the batch of dipped springs and the basket.

Coated springs are poured from the dipping baskets into wire mesh baskets, either for air drying or baking, depending upon the type of paint or enamel specified. Those springs that require a baked finish are placed on a conveyor which car-

*9200 Russell St., Detroit, Mich.



In lower right foreground you see a portable dip tank, curved drain pan and centrifugal machine into which a basket of dip-coated coil springs is being lowered. Three more of these units appear in background. Overhead oven appears at upper right, in background.

ries them through an indirect gas-fired convection oven where they are baked for 25 minutes at 450° F. Upon leaving the oven, all loaded baskets are stacked until the springs have time to cool. Then they are packed for shipment.

Valve springs coated with an air-dry enamel remain in the baskets for five to six hours before they are packed for shipment. An experienced centrifugal machine operator will finish 10,000 valve springs per hour.

The Centrifugal Machine; How It Is Cleaned

We have five centrifugal machines and several tumbling barrels. The latter are used for cleaning metal clips and small parts. Each centrifugal machine has a drip pan attached to the side where the portable dip tank is placed. The dip tank fits under the extended end of the drip pan so that any enamel that drains from the loaded baskets will flow back into dip tank.

Each centrifugal machine has an automatic pump which operates only when the work basket is being spun. This pump returns excess enamel (thrown off the springs and basket by centrifugal force) back to the dip tank, thus preventing an accumulation of enamel inside the machine. The dip tanks are mounted on ball-bearing swivel casters to facilitate moving them when it is necessary to change enamel colors.

Changing colors at a centrifugal machine is a simple job. After removing the portable tank, a tank of solvent is rolled into place. About two gallons of solvent are poured

(Continued on page 41)

At extreme left are bins into which valve springs are dumped by a conveyor. They are released through sliding doors to fill dipping baskets. Notice position of portable dip tank in relation to curved drip pan attached to the left of centrifugal machine. Coated springs are in heavy wire baskets at right of machine, for air drying or oven drying.

METAL finishers using Oakite Compound No. 33 say this new cleaning-phosphating material is just what they've been looking for: a solvent-acid combination that in one operation removes oil and rust and conditions the metal surface for painting.

Oakite Compound No. 33 is great for removing rust, heat scale, other oxides, carbon smut, soldering and welding residues, identification inks and oil from steel, cast iron, aluminum sheet and castings.

Oakite Compound No. 33 is a great soak cleaner for metal parts of moderate size; and great for hand-swabbing on large parts like cabinets, desks, doors, tractors and truck cabs.

Oakite Compound No. 33 saves money; frequently eliminating separate pickling operations on moderately rusty steel. It produces splendid paint adhesion.

FREE If you'll drop a line to Oakite Products, Inc., 32F Thames St., New York 6, N. Y., we will be glad to tell you more about Oakite Compound No. 33.

ALSO *ask about Oakite procedures for:*

Machine cleaning	**Tank cleaning**	**Pickling**
Electrocleaning	**Burnishing**	**Paint stripping**
Steam-gun cleaning	**Barrel cleaning**	**Rust prevention**

Technical Service Representatives in Principal Cities of U. S. & Canada

OAKITE SPECIALIZED INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

A Poor Finish Maketh Waste

A poor finish can strangle your production line . . . delay deliveries . . . reduce sales—cause losses all along the line!

ZAPON industrial finishes are especially made to assure the best of protection and good looks. They can be formulated to meet your finishing requirements.

If you have a problem involving finishes, turn it over to ZAPON's Customer Service Department. This group of skilled and experience-wise specialists will be quick to bring you ZAPON'S *service from every angle.*

Service from every angle . . .

that's ZAPON

ATLAS POWDER COMPANY

Industrial Finishes

Stamford, Conn. · North Chicago, Ill.

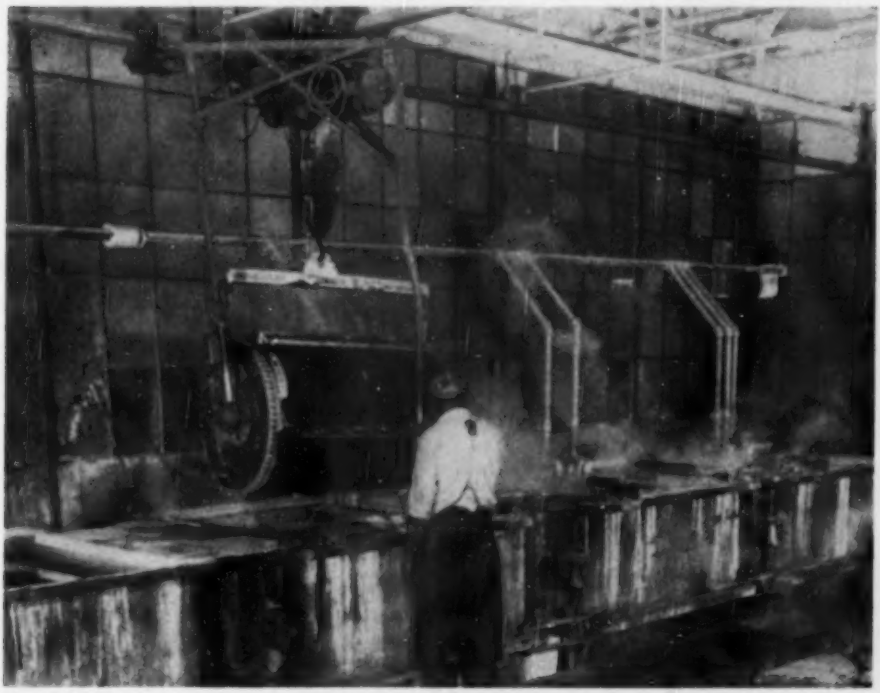
into the machine, and the spinner table is set in motion; while the spinner is operating, the pump returns pigmented solvent back into the dip tank. The drip pan and inside walls of the machine are washed down with solvent to complete the cleaning operation. Before a holiday or week end the machines are cleaned immediately after use. This practice not only provides clean equipment at all times, but it makes the cleaning job easier and faster.

Now let us consider the tube springs which require metal cleaning and rust-proofing. For reasons of speed and economy, all cleaning, rust-proofing and finishing operations on all types of springs must necessarily be on a mass production basis. For this work the usual cleaning and finishing equipment is impractical.

Cleaning and Coating Tube Springs

Most tube springs require both metal cleaning and rust-proofing. To accomplish this, from 2500 to 3000 springs are placed in an open mesh, heavy-gauge tumbling barrel. One end of the tumbling barrel

(Continued on page 42)



Suspended from a traveling hoist is the cylindrical tumbler in which coil springs are cleaned and rust-proofed. When the tumbler is deep in the tank the circular ratchet band at its left end is engaged and rotated by cam-operated pawls located in left side of tank.

has a ratchet band around its circumference. The ratchet teeth make contact with a cam-operated pawl in each dip tank to slowly remove the immersed barrel. The rotating motion agitates the springs inside the barrel so that the cleaning and rust-proofing solutions may contact the entire surface area of all of the springs.

Metal cleaning begins at a 3-stage vapor degreaser. The loaded barrel is lowered and raised vertically by means of an electric hoist attached to a manually operated crane. First it is lowered into boiling water. Next it is lowered into trichlorethylene, and finally into the trichlorethylene vapor section. Upon removal from the latter, it is lowered into the rust-proofing solution which is held at a temperature of 190° F. Then follows a hot water rinse, also at 190° F. In the last tank, springs are given a conditioning rinse in a chromic acid solution at 190° F. Then they are force dried for 15 minutes. The loaded barrel is slowly rotated in each tank and during the drying.

Tube springs are coated in a centrifugal machine, in exactly the same way as valve springs, spinning from 1½ to two minutes per load.

In finishing our varied products we use 50 different types and colors of air-drying and baking enamels. Perhaps you wonder why various colors are required for springs. The reason is well founded. Manufacturers specify definite colors for certain springs to expedite work on their assembly lines and for inspection and identification purposes.

Editor's Note: New centrifugal machines, wherein both dipping and whirling are combined in one machine to save floor space, material handling and time, are on the market and in extensive use in factories in eastern U.S.

Lewis B. Kelly Represents Smith-Davis in L. A.

G. Klinkenstein, President of the Smith-Davis Co., (manufacturer of industrial finishes), 10751 Venice Blvd., Los Angeles 34, Calif., announces the addition of another sales engineer to cover part of the Los Angeles territory.

This new man is Lewis B. Kelly, who has recently been appointed to the Smith-Davis Company's sales force and has been assigned to cover a large section of the Los Angeles territory. Mr. Kelly has had many years of experience in the field of specialized production finishes as well as considerable experience in the field of trade sales products.

Mr. Kelly's experience dates back to 1928 so that he is fully acquainted with the servicing of technical finishing problems. In view of the foregoing, Mr. Kelly's experience and knowledge of handling all types of specialized production finishes should undoubtedly be valuable in making the Pacific Coast manufacturers' finishing problems simpler.

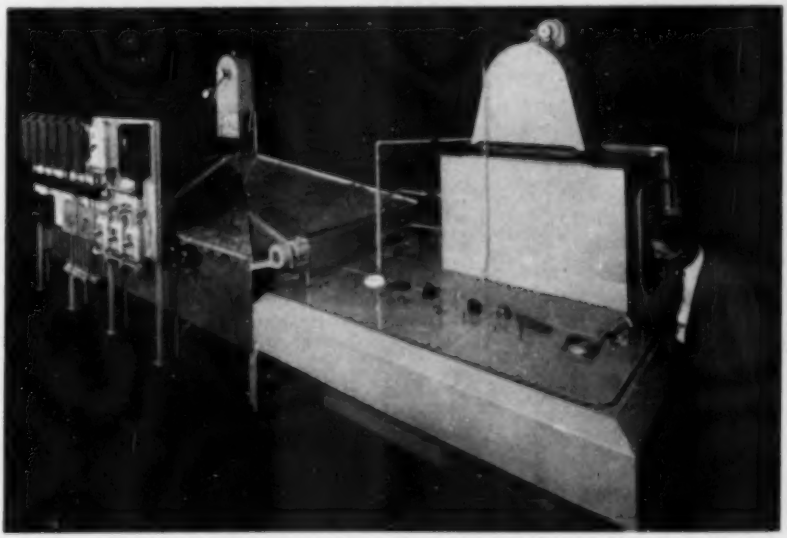
Carlson with Watson-Standard Co. in Chicago Area

Watson-Standard Co., Pittsburgh, Pa., announces the appointment of C. R. H. Carlson as district manager in charge of the Chicago Metropolitan area.

Mr. Carlson was previously associated with three other large manufacturers of finishing materials. His work during the war, as lieutenant in the Quartermasters Corps Technical division, earned him membership with the "Gallows Birds," an exclusive group of men who wrote specifications for war materials. He graduated from the University of Iowa with a B. S. degree in Chemistry. Watson-Standard is a manufacturer of lithograph coatings, industrial finishes and plastics.

LOWER YOUR SPRAY-BAKE COSTS

by finishing small pieces (compacts, clocks, pens, etc.) in large quantities, in any shape, on this Capitol High Speed Electric Spray-Bake Conveyor Equipment. Prominent manufacturers of clocks, automotive parts, hardware, compacts, pens, pencils, lipsticks, etc., are among the many satisfied users of Capitol Machines, Models B, C and D, one of which is pictured below.



Shown on working bed of machine are: clock casing, pencils, toy train, motor housing, dial ring, and door knobs—a few of many items which can be spray-bake finished.

Here's How: Speedy production—Over 200 pieces per minute. Small space required—as little as 6′ x 18′. Quick change adjustments—only 10 minutes! Machine cost recovered in few months by actual case histories. Absolutely uniform quality controls.

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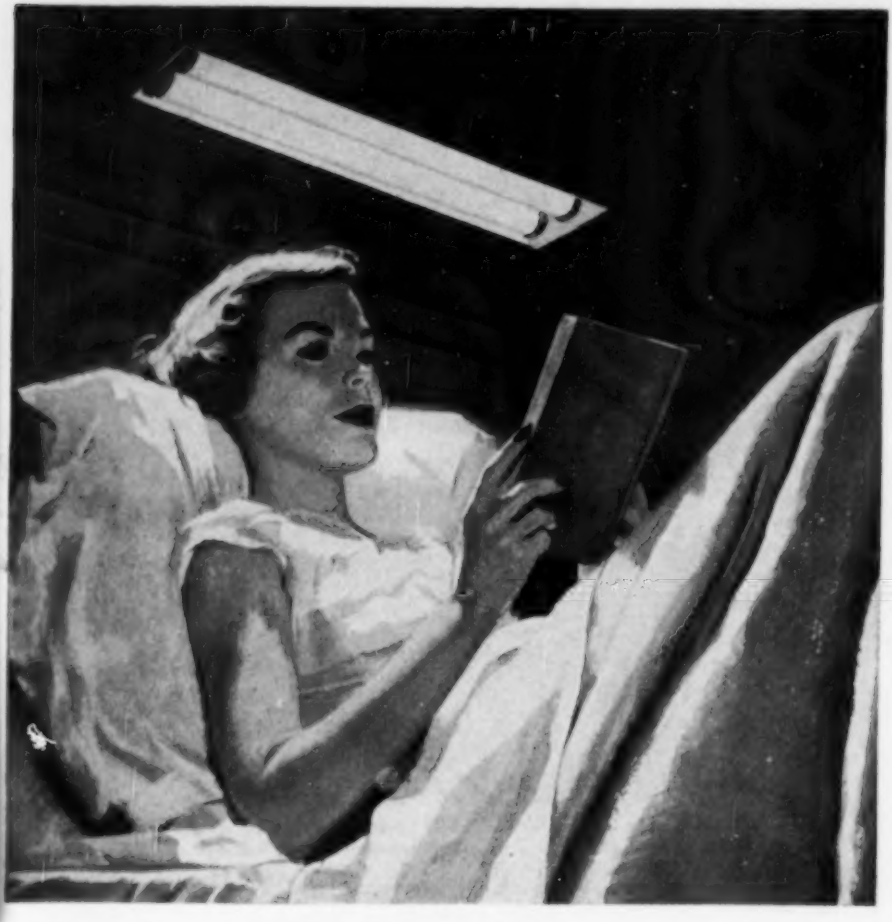

This light used to fade! The problem: To find a way to keep the reflector surface on fluorescent lights from yellowing, so that the maximum amount of light would always be maintained.

The solution: Industrial Finish Engineers developed a special marproof, baked finish that keeps its original whiteness and light reflectivity. Result: Customers get more light from fluorescent lights, with less electricity.

The better the finish – The better the buy!

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Problem: To find a finish for typewriters and other office equipment that would not reflect light and glare.

Solution: Industrial Finish Engineers developed a "wrinkle" finish that absorbs light—cuts down glare—is easily cleaned —and is not a dust catcher.

Problem: To find a finish for Venetian blinds that would not flake off when the blind was raised.

Solution: Industrial Finish Engineers developed a finish that withstands impact of blinds being raised and lowered. It wipes clean . . . withstands rain and sun baking.

Problem: To find a finish for telephone receivers that would resist perspiration from user's hand.

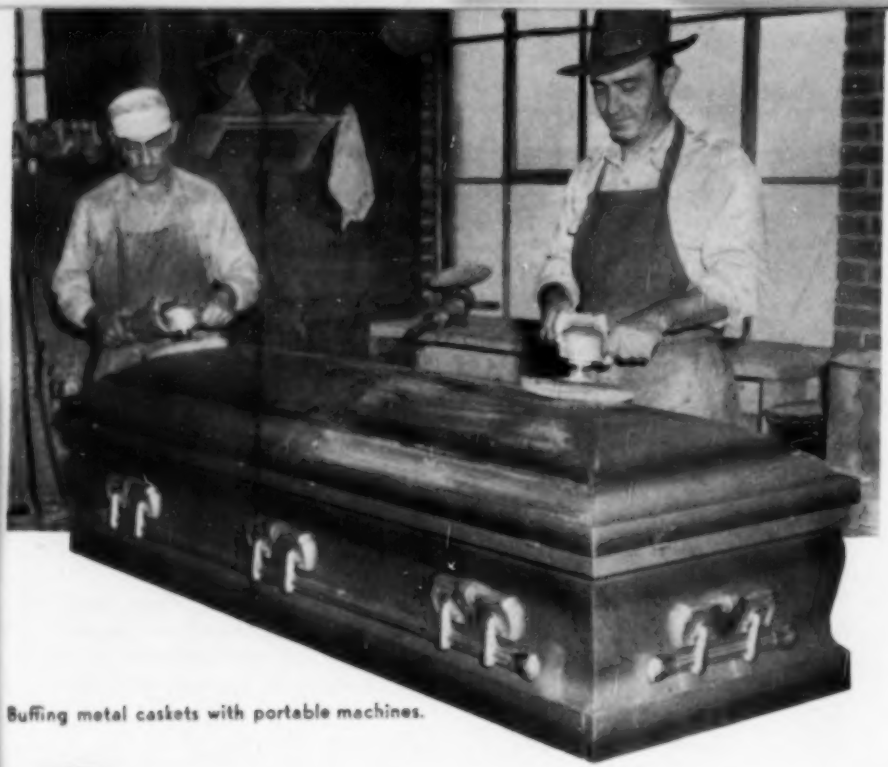
Solution: In their laboratories, Industrial Finish Engineers developed a finish that was perspiration - resistant — withstands impact when person drops receiver on hook —is easily applied.

Learn what Industrial Finish Engineers can do for your sales!

Here you have just a few fast examples of how Industrial Finish Engineering can and has brought more sales appeal to many products.

Let it do the same for yours. Find out if it can improve your sales—cut costs—expand markets. Consult an Industrial Finish Engineer.

For the Finish Industry has technical ability to make finishes equal to the purpose for which each product is bought. Remember, most of your customers *start buying with the finish in mind.*



Buffing metal caskets with portable machines.

Finishing METAL CASKETS

By L. A. Fletcher

Plant Superintendent
Imperial Casket Co., Inc.

THE VISUAL appeal of a product probably has more to do with its acceptance in the casket industry than does such appeal have in the choice of other products. The depth, luster and clearness of the finish play a decided part in the salability of metallic caskets. Although the casket industry does not use a large number of different colors and shades, the industry is adamant in its demand that those shades and colors which are used, be in keeping with the product, and that these shades and colors have the utmost permanency and depth.

The permanency of a finish is directly related to the state of cleanliness of the surfaces on which the finish is applied. While parts for metal caskets are going through the various cutting, forming, welding, soldering and sanding operations, they will pick up more or less shop-dirt and smudges. This shop-dirt is removed by the use of a phosphoric acid cleaner of the "wipe-on" type. [*To page 48*]

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METAL PHOSPHATING CHEMICAL

Prepares Metal for Painting

TO USE SURPHOS

. . . dissolve in water to a concentration of one ounce per gallon and apply to metal by dipping or spraying. Acid proof equipment not needed.

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- **PREVENTS RUSTING**
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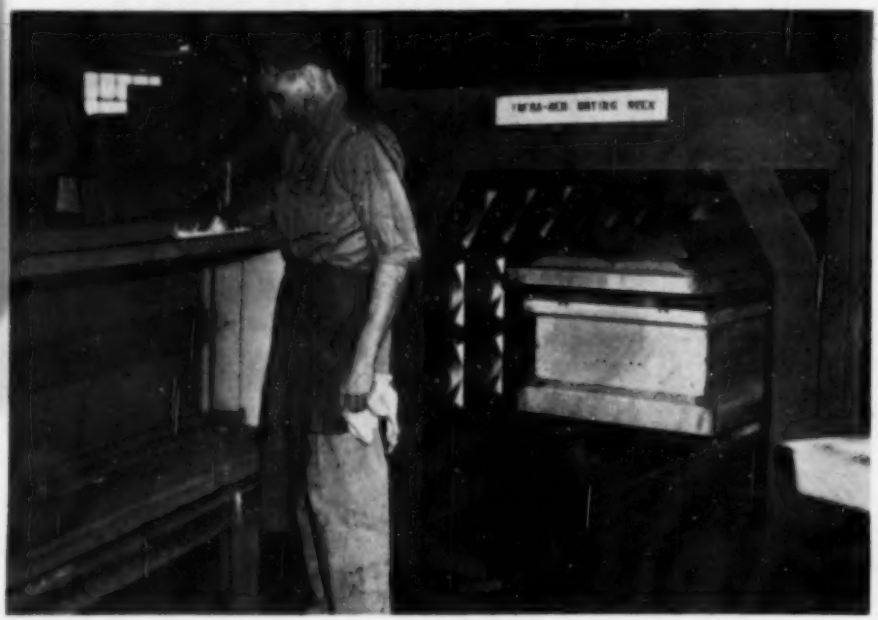
After the inside and outside of the shell and its component parts have been carefully and thoroughly cleaned, the entire casket is dried in an infra-red drying oven. Upon the efficiency of this phosphoric acid treatment and its consequent drying, depends the adhesion of the finishing material and the inhibition of rust. This cleaning and drying may vary with the production schedule of the plant, but it is one of the important preparatory steps in casket finishing.

When cleaned caskets are dry they are moved into the paint room on dollies. This room contains four recessed spray booths and is partitioned off from the main plant. Each spray booth is equipped with a ventilator fan to remove fumes and overspray. Eight large air filters are placed at regular intervals, each near a radiator, to supply warm, dust-free air to the paint room. The individual ventilator fans are equipped with dampers to allow the shutting off of unfiltered air in case repairs on the fan or in the booth might be necessary.

Tack Rag Wiping; Spot Priming Sanded Places

Upon entering the paint room the casket is carefully wiped clean with a tack rag. The corners of each casket and all sanded spots are coated with a primer that contains red oxide. A spray gun pressure of 68-lbs. is used in this operation. Material tank pressure is 20-lbs.

(Continued on page 50)



Cleaning metal caskets by hand wiping with liquid cleaner. Then follows infra-red drying.

● Here's an M&W finish that permits accurate retention of all desirable surface qualities of most metals . . . that adds lasting protection against heat, cold, weather, corrosion, stain and perspiration — Dulac Clear Universal Lacquer #462. It's formulated to give good adhesion with either the spray, dip or brush method. And it fits into fast production schedules because in five to ten minutes this successful general purpose lacquer dries out of dust . . . hardens in one hour. For complete information, write for Technical Data Bulletin 110 or let an M&W technical consultant discuss your requirements privately with you.

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MANUFACTURERS OF INDUSTRIAL FINISHES

Hand sanding the prime coated surfaces on metal caskets.

After these prime-coated areas have dried the entire casket, inside and outside, is given a heavy coat of the same primer. The casket is then pushed into the sanding room where dents and deep scratches are filled with putty. The putty is allowed to air dry. Upon drying, the casket is wet-sanded with No. 280 abrasive paper.

After the casket has been sanded it is moved into the spray room for the finishing coats. All areas that have been rubbed to the metal are given a spotting with primer.

Color Coats Followed by Shading and Blending

With the prime coatings completed and the surfaces dry and smooth, the casket is then given its first color coat; in this operation, cup spray guns are used and a gun pressure of 60-lbs. is maintained. After the color coat is applied the casket is again inspected for small irregular surfaces, and any that are found are smoothed out by means of putty, followed by sanding with No. 280 sandpaper. The casket is then given a second coat and moved over to the blending, shading and lacquer booth.

Shading and blending are done with cup spray guns, using approximately 60-lbs. of pressure. After the blending is done the casket is allowed to air dry for approximately 15 minutes. Then it is given a coat of clear buffing lacquer. This coat of lacquer is allowed to dry tack-free before the casket leaves the paint room. It should be mentioned that several coats of lacquer, with sanding following each coat, are sometimes resorted to, to meet a customer's specific desires.

(Continued on page 52)

From actual service records, it's easy to see why infra-red is the choice of more and more product finishers. So many real problems are eliminated by this type of baking oven. It speeds up finishing. It cuts space requirements, costs less to install, allows quicker, better control of heat, wastes less of its output. And for years it has been piling up the evidence of substantial savings – savings in baking time, in costs of operation. It has proved it can supply a better bake; minimize rejects. So if you're looking to install or improve a baking cycle, chances are infra-red is *your* best bet too.

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manufacturers of industrial infra-red heat lamps • vibration service lamps • rough service shockproof lamps • sealed beam reflector lamps • reflector spotlights and floodlights • street lamps • traffic signal lamps.

Final Wet Sanding and Buffing

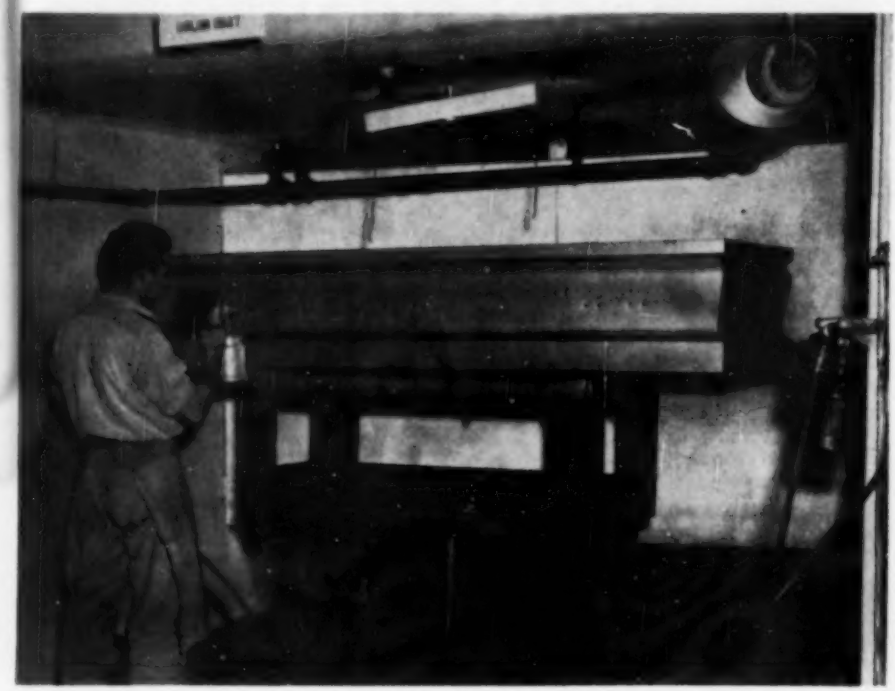
After the caskets have dried for a minimum of 24 hours they are ready for final wet sanding and dry buffing. It has been found here that this 24-hour drying period results in an excellent finish. The caskets are first wet-sanded with No. 400 abrasive paper, wiped dry, and then buffed with a high-speed buffing wheel. A buffing compound which is miscible with water is used to produce a high gloss finish.

The finishing of metal caskets, in a limited production run, calls for far more than just getting the right fluidity of paints and the right air pressure at the spray guns. To secure the desired luster and permanence of a finish requires modern equipment that is in proper working condition, correct timing, trained and willing personnel, good housekeeping and, above all, the spirit of constantly seeking better ways to do a better job.

R. E. Layman Now Technical Director of The Voltax Co.

Mr. Ralph E. Layman has been appointed technical director of The Voltax Co., Inc., of Bridgeport, Conn., manufacturer of organic coatings for industry.

A graduate in Chemical Engineering, Mr. Layman has had several years experience with other companies and has had a private consulting practice, before joining Voltax.



Spraying color coat from cup gun in a spray booth well lighted and properly ventilated.

Highlights on

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Product Finishes

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HARD AND DURABLE

A truly beautiful white of porcelain-like smoothness and good gloss—a bake of only 15 minutes at 300° F.—a surface that stands up well indoors and outdoors—that's the finish you'll get with VITRA CARLITE.

VITRA CARLITE would wear well on refrigerators, slicing machines, scales, deep freeze cabinets, metal lockers, water heaters and other items where the finish is expected to last for years.

VITRA CARLITE may be had also in tints, colors and clear.

Hilo Bulletin No. 21 gives further details and simple directions for the application of VITRA CARLITE.

You may have free a trial lot of Hilo Vitra Carlite in White or Black, or the Blue, Red or Green shown in Bulletin 21.

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Brushes Speed Finishing of Golf Irons

INCREASED OUTPUT combined with better surface finish on stainless and carbon steel golf heads has been obtained by power brushing, The Hillerick & Bradsby Co., Louisville, reports.

Since changing over to Monarch sections* considerable savings have been realized because of longer brush life.

The brush used is a 16-in. diameter Osborn Monarch Section. In the case of carbon steel heads, brushing is the last finishing operation prior to plating. In the case of the stainless steel heads, the brush applies the final finish.

*Product of The Osborn Mfg. Co., Cleveland, Ohio.

Operating off a brush lathe, this 16-in. diameter Tampico Section is speeding the finishing of stainless and carbon-steel golf iron heads. The action of the brush blends imperfections and surface irregularities rather than to remove any of the metal.

Brushes of fiber, such as those used here, can modify and change the condition of metallic surfaces appreciably. It is this ability which gives these brushes value for polishing and buffing. The action of the brush is that of blending imperfections and surface irregularities rather than the actual removal of metal, as is obtained with wheels or abrasive belts.

The Osborn brush is used on a buffing lathe at a speed of 1750-rpm. It is the final operation following grinding, and set-up wheel polishing.

On stainless steel club heads, the brush smooths and blends out all previous wheel and grit marks, plus adding a lustrous satin-like finish.

The manufacture of golf irons is a precise and accurate operation. The clubs are drop forged and then ground to weight. High luster finishing then provides both a perfect surface prior to plating, and a good final surface for appearance to Louisville Power-Bilt and Grand Slam golf irons.

Preventing Dissimilar Metal Corrosion

By Gilbert C. Close

T. E. PIPER, Chief Process Engineer of Northrop Aircraft, Inc., one of the world's largest users of the magnesium alloys, makes the unqualified statement that the service life of magnesium, when used in an assembly with other metals, depends to a great degree upon proper insulation to prevent dissimilar metal contacts.

"This is because magnesium occupies a high place in the EMF series of metals," Piper points out. "When it is brought into direct contact with metals of lower potential, current flow between the two results in rapid electrolytic corrosion. The only way to prevent this is to provide insulation between the dissimilar metal contact surfaces." [*Continued on page 56*]

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Black Arrow "HOLLOW AIR" Spray Gun. The finest all-around, all-purpose gun in use today. Try it!

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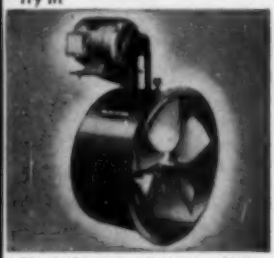
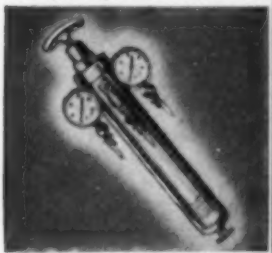


Black Arrow Exhaust Units. Range from 12" to 42" diameters — meet all Underwriters' specifications.



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Due to widespread use of the magnesium alloys by Northrop in critical aircraft applications, where even slight corrosion cannot be tolerated, the company has conducted extensive research into methods of preventing dissimilar metal corrosion. These methods have been perfected to a point where such corrosion ceases to be a major problem. The following is specific and detailed data on the methods now employed:

1) All copper, brass, bronze, or steel alloys (except corrosion resistant steel) which are assembled in contact with magnesium alloys, must be cadmium or zinc plated. This includes press fittings such as bearings, bushings, etc.

2) All exterior magnesium alloy surfaces that are assembled in contact with dissimilar metals must be insulated with high-pressure zinc chromate compound between the faying surfaces.

3) All interior magnesium alloy surfaces assembled in contact with dissimilar metals must have at least two coats of zinc chromate primer applied to each faying surface.

4) 56S alloy rivets must be used on all magnesium alloy riveted assemblies. Machine countersunk surfaces must be primed before inserting rivets.

5) Bolts installed in magnesium alloys shall be inserted with wet zinc chromate primer. It is not considered necessary to prime washers or nut plates in contact with the primed magnesium alloys.

Though less critical than magnesium, insulation of the aluminum alloys under specific conditions has also come in for a great deal of consideration. The following practices are rigidly observed in the Northrop shops:

1) One coat of zinc chromate primer must be applied to each faying surface of contacts between aluminum alloys and corrosion resistant steel, inconel, or monel.

2) Aluminum alloys assembled in contact with magnesium alloys must follow the insulating practices described for magnesium.

3) Aluminum alloys assembled in contact with cadmium plated steel or copper alloys does not require the application of an insulating coat of primer.

4) At least one coat of zinc chromate primer must be applied to each faying surface of contacts between aluminum alloys and unplated steel or copper alloys.

Other shop rules regarding dissimilar metal contacts which are now in force include:

1) Corrosion resistant steel, inconel or monel, need not be plated, and needs to be insulated only when installed in contact with magnesium or aluminum.

2) Steel alloys require no insulation of faying surfaces except when used in contact with magnesium or aluminum.

3) Copper alloys require no insulation except when used in contact with magnesium or aluminum.

Any company who has been bothered by corrosion caused by dissimilar metal contacts can follow the above specifications with complete insurance. All methods listed have been varified and approved by the Army, Air Force, and Navy procurement divisions.

Bakelite's 40th Year

1950 marks Bakelite's 40th year. To observe this occasion a compact history of Bakelite Division, Union Carbide & Carbon Corporation, and its full four decades of progress in the plastics industry has just been published in a special edition of "Bakelite Review" (32 pages 8½x11-in., two color). Anniversary copies are available upon request. Bakelite's address is 300 Madison Ave., New York 17, N.Y.

From Bakelite's start in 1910 to its position today as one of the nation's leading industries, the company has combined modern engineering science, production, and marketing technics to provide high quality materials with economy for industrial progress.

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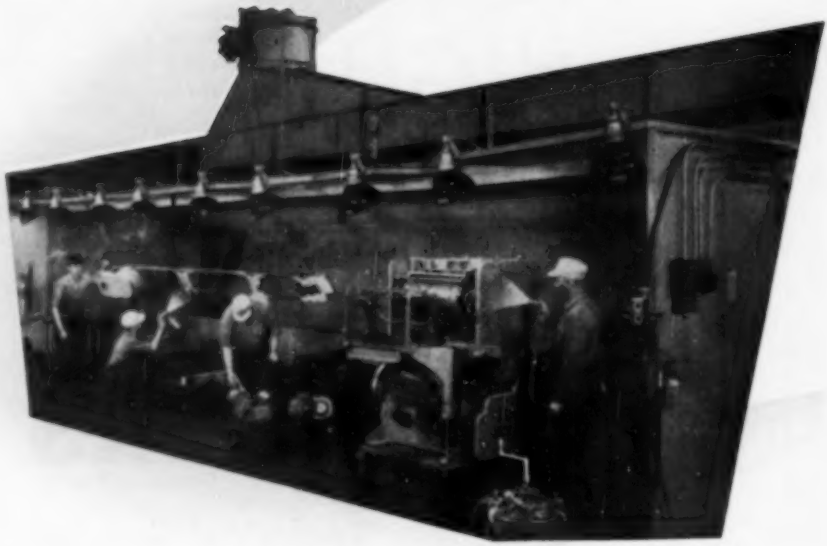

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Shown in cut-away is one of the more common types of the many DeVilbiss Air-Wash Spray Booths suitable for practically every job.

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New Developments in WOOD FINISHES

Stains, fillers, sealers and top coatings (clear lacquers and heat-cured synthetics) that have characteristics which are especially desirable in production finishes for modern furniture and fine cabinets.

By Rollin H. Wampler

THIS STORY of a research and product development program, in one firm, illustrates how such a program develops naturally from the demands and needs of a manufacturer's customers. If the complete story could be told, it would also illustrate how sustained intelligently-conducted research projects, with clearly defined objectives, often quickly solve stubborn problems in production finishing for customers.

Successful problem-solving is often the key to developing new business. Frequently it results in new products that are superior to others available at the time. Without for a moment losing sight of the factors of good management and good merchandising, a business built on "building a better mousetrap" is certainly sound. Rapid and sound solution of special problems is one way the customer gauges the responsiveness of the supplier to his special needs.

Clear Lacquers That Don't Discolor

For a long time there has been a need, in fine wood finishing, for topcoats that develop the utmost clarity necessary to bring out the subtle tones and grain patterns in fine cabinet woods. This need has been recognized and solved in part in past years by the development of special transparent flatting agents for flat lacquers, varnishes, and synthetic materials. But a much broader approach to the problem has been needed, extending also into the field of gloss finishes. Here the

problem is even more complex, because, in most cases, the "flash" and brilliance of conventional gloss materials must be avoided. Essentially, it resolves itself into a problem of developing haze-free transparent materials that give a soft brilliance without the hard "shine" of most gloss materials.

The whole problem, covering both gloss and flat materials, has been solved by a special method of formulating to achieve these special ends. This special formulating method involves perhaps 12 or 15 factors, such as choice of raw materials, proportion limits, and processing methods. The end result is a series of trade-marked furniture lacquers that are demonstrably superior in clarity, in all ranges of flatness up to straight high gloss, to any materials heretofore available. This clarity is particularly notable on the darker colors, especially the dark Cordovan mahogany finishes that are currently popular.

More Furniture in Light Finishes

For many years furniture colors have been becoming lighter. While there have been short-term gyrations back and forth, the general trend over the years has been toward lighter-colored wood finishes designed to bring out the full beauty of the colors and grain patterns in fine woods.

Some of the lighter colored wood finishes have delicate overtones of color that must not be obscured by the topcoat lacquers and synthetics. For example, the currently popular French walnut or provincial French colors are often based on toners having delicate blue undertone.

Now it is a fact that most topcoats change slightly in color with age. Some turn bright yellow, while others go toward redder yellows or light browns, and some even become grey. It is obvious that the yellowing tendencies of the average furniture lacquer applied over a delicate blue undertone will quickly turn the color to an undesirable sickly green. There is the problem: To develop a truly water-white lacquer that will not turn yellow with age, and to direct the color change (and there must be some, however slight) toward one that will not obscure delicate undertones of color.

Water White Lacquers; Color Retention

Wood finish technologists all know how to make water-white lacquers that retain their color much better than conventional materials. It is also well-known that to develop color retention to the extreme, involves some sacrifice such as in film thickness, gloss, flow, adhesion, rubbing properties, or any one or more of many others.

The problem was to develop a truly water-white non-yellowing lacquer that has all the desirable properties of conventional furniture lacquers; and which in addition, has far better color retention than conventional water-white lacquers.

The story of this development could fill a book. Special testing and evaluating methods had to be developed. Hundreds of raw materials had to be re-evaluated in terms of color retention. The whole problem of color stability had to be achieved through special color stabilizers; stabilizers for preventing

discoloration in steel drums, stabilizers for preventing color change due to light on the film, and stabilizers against heat had to be looked into. Even oxygen inhibitors had a part in the investigation.

Some surprising things were turned up, such as the fact that solvents have considerable influence on the color stability of a lacquer film many months after it has been applied. The result of this long and involved project is a series of non-yellowing water-white lacquers that achieve true color rendition and color retention without any sacrifice of fullness, alcohol and water resistance, print-resistance, and good working properties. These materials are proving their worth in large-scale use.

Alcohol-Resistant Furniture Lacquers

A third project has been the development of truly alcohol-resistant lacquers. The development and use of the well-known urea-alkyd furniture finishes has set new standards of resistance to alcohol, perfumes, water, and even to such lacquer products as nail polish and nail polish remover. It would be highly desirable to have these properties included in a lacquer.

This problem initiated a new research project that has resulted in a series of lacquers that have an alcohol-resistance on a par with that of the urea-based finishes. Paradoxical as it may seem, these lacquers, with a few weeks of aging, develop a remarkable resistance to nail polish remover, achieving again one of the special properties of urea finishes. Such lacquers are particularly indicated for cocktail and coffee tables, dining room tables, dressers, and chests.

These truly alcohol-resistant lacquers achieve their remarkable resistance properties through a number of things. They involve far more than a careful choice of ingredients that in themselves, have good resistance to alcohol. Consideration of what happens in the lacquer film with age points the way towards special methods of formulation that result in a type of lacquer whose resistance increases almost indefinitely with age.

Most lacquers drop off rapidly in resistance to alcohol after the film ages, a fact that is well known. To halt this deterioration, and to reverse the trend, produces materials that improve with age. At this writing it is not known when, if ever, this improvement ceases or begins to decrease. But in spite of the unknown factors, here, at last, is a type of material that is vastly superior to all other lacquers in these special resistance properties.

Synthetic Finishes of Improved Quality

Furniture finishes based on alkyd, urea, melamine, and other thermosetting resins have well-known virtues and faults. Among these latter may be mentioned such extreme hardness as to detract from their rubbing properties, poor adhesion over most sealers, a tendency to brittleness, and the relatively high and sustained temperatures necessary to convert them to the infusible, insoluble stage.

These faults stem from insufficient knowledge of true catalyzation of the thermosetting resin portion, and lack of information on how

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109 FULTON STREET BROOKLYN, N.Y.

properly to plasticize the cured resins. In this latter respect most of the materials currently available are at the stage where nitrocellulose lacquers were 25 years ago. In fact, little thought seems to have been given to these fundamentals.

An attack on this problem has led to the discovery of materials and methods that give a cured film that is truly elastic and tough, and which has much better adhesion to substrata. Study of the catalyzation problem has led to the discovery of how to produce completely cured films, free of brittleness, at very low temperatures. In fact, some so-called air-drying urea finishes are on the market.

Low-Heat-Curing Synthetic Finishes

The best low-temperature ureas on the market will cure overnight at 100° F., or with an initial start at low temperatures, followed by overnight air-drying. In fact, a start of as little as 30 to 60 minutes at 120° to 130° F., followed by overnight air-drying, produces ultimate resistance properties, but the film remains tough and flexible instead of hard and brittle, as in the case of many of the baking materials. The added quality and safety factor of a little heat with these low-temperature materials is well justified, and there is then no question of their satisfactory service.

At this time it seems necessary to have a little heat to initiate the cross-linking between molecules, which is so necessary for toughness and freedom from brittleness, cold-checking, and crazing. The end result of this research project is a truly catalyzed and truly plasticized urea-alkyd furniture finish free from most of the faults of the conventional materials. It is in commercial use, and is filling a real need for customers dissatisfied with conventional baking urea furniture finishes.

Adhesion, Toughness and Cold-Crack Resistance

A critical study of lacquer plasticizers has revealed some little-known and startling facts. An evaluation of current theories as to the influence of the volatility of various plasticizers on the adhesion, toughness, and cold-crack resistance of furniture finishes has revealed a number of formulating principles that have led to significant improvements in these properties. A study of the most efficient plasticizer for each class of material in the non-volatile portion of lacquers has led to great improvements in hardness without any sacrifice in cold-crack resistance.

One of the classes of lacquer products that has benefitted most from these studies is lacquer sealers. These materials must seal off the porosity of the wood and of the filler, and at the same time provide a certain amount of build so that succeeding coats will stand out with a minimum of absorption.

The sanding requirement (easy sanding wanted) has severely limited the quality of the sealer film, especially with respect to toughness and adhesion. While this was true in the past, these plasticizer studies have indicated ways of formulating that confer to the sealer film the same good toughness and adhesion characteristic of fine top-

(Continued on page 68)

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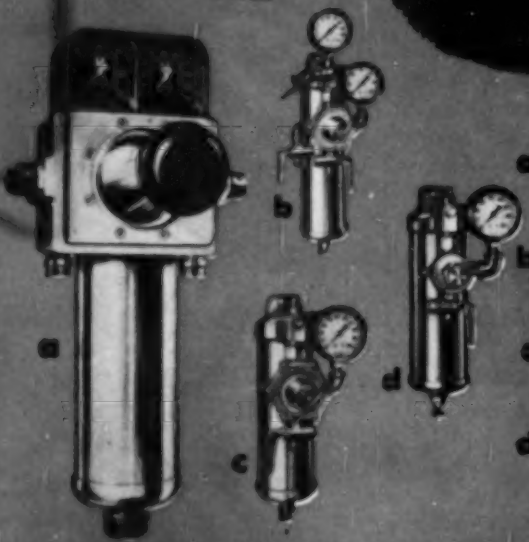

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c Model 542A Extractor—An inexpensive extractor furnishing ample clean, dry air for one gun of any model.

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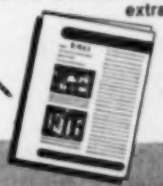

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coat lacquers. The end result is a series of new sealers that confer extremely good toughness and adhesion to the system, especially over mahogany, without any sacrifice in smooth easy-sanding properties.

Wood Fillers; N. G. R. Stains

The techniques of wood filler formulation have not changed much for several years. A critical study of the factors that cause pinholing, lifting, poor wiping, settling, and greying in the pores has indicated ways of correcting these faults so characteristic of many commercial materials. The end result here is a number of materials that are proving eminently satisfactory in service. Some are so formulated that they can be coated over with lacquer sealer 30 minutes after wiping. This speed has been made possible with no sacrifice in clean easy-wiping properties.

Bleeding, fading, streaking, poor stability in bulk, and other faults often show up in some non-grain-raising stains. An intensive research program directed toward finding and correcting the causes of these faults has resulted in a series of fine quality non-grain-raising stains that are proving their merit in practice.

Shellac has had no peer as a wash coat under filler because of its unique sealing properties, and because of the ease with which a clean-cut smear-free filling job could be obtained over it. A study of the entire field of available raw materials has turned up one or two that make possible a wash coat that has all of the desirable properties of shellac, and none of the undesirable characteristics of lacquer-base materials. In addition, this unique material confers far better adhesion under lacquer sealers than shellac.

Many lacquer shading stains interfere with the adhesion of topcoats, fade upon exposure to light, and exhibit other defects. Permanent, light-fast shading stains that interfere very little with adhesion have been worked out and are available.

Heat-Cured Finishes for Furniture

Much interest has been shown in recent years in the whole field of thermosetting or heat-hardening coatings for furniture. Many industrial users of finishing materials are familiar with only one thermosetting material—the urea-alkyd finish described above. The obvious advantage of this kind of material is great durability because of great hardness and resistance to most liquids with which it is likely to come into contact. In many products thermosetting materials have been added, sometimes in small quantities. The result has been, in many cases, a slight improvement in some property or other. But the cumulative results have been rather substantial improvements in some classes of materials.

One of the most serious problems facing the research chemist, in his efforts to improve wood finishes as they exist today, is that of good adhesion, particularly on soft cabinet woods. A finish that will take a lot of mechanical wear, and yet one that can be rubbed up nicely without too much trouble is highly de-

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IN STEP WITH THE TIMES

JAMES B. DAY & CO.

CHICAGO 14

sirable. Brittleness and poor adhesion are serious limitations to many present-day materials and techniques.

Ideal Furniture Finish Closely Approached

The ideal wood finish, of course, is one which is truly a sheet of tough, durable clear plastic over all exposed surfaces, perfectly keyed into the wood. In approaching this ideal, certain compromises must be made. For example, in many ways a thermosetting urea finish more closely resembles a tough plastic than many other materials. And yet if the urea finish is made as tough and hard as it can be made, difficulties in rubbing and adhesion are encountered. It rubs up with great difficulty, and is hard to bring up to a clean, clear finish .

The harder the urea finish, the more adhesion difficulties are encountered. In fact, the greatest toughness of a urea finish is brought out by self-priming, without the use of lacquer sealer. But yet, in most cases, the first coat should be capable of quick and relatively easy sanding to produce a smooth finish.

Another compromise that must be made in plastics in solution form is the balance between toughness and viscosity. The tougher plastics in general result in low-solids solutions, so that such coatings lack build or fullness. To modify these solutions so as to increase solids at spraying viscosity almost always results in a loss of toughness and integrity in general. Hot-spraying is one way of getting around this.

To describe or even mention current research projects and the trends of thought that are guiding them would prolong this article beyond practical limits. From them, however, will come the superior materials of tomorrow to aid the industrial finisher of wood products in improving his work.

Allied Fin'g. Spec. Appoints Cleveland Representative

The Allied Finishing Specialities Co., 2655 W. Grand Ave., Chicago, Ill., announces the appointment of Mr. James C. Neylon as its Cleveland area sales representative. Mr. Neylon is a graduate of Harvard University and has had a great deal of experience with industrial finishes.

Following his graduation, Mr. Neylon was employed as Head of Technical Sales Service for finishes with a large chemical company in Ohio for seven years. During his employment with this firm, he developed thousands of finishes for all types of materials, many new processes of manufacturing and applying, and many novel design effects in both finishes and plastics.

With various firms, he has held such titles as Chemical and Production Engineer, Executive Chemical and Plastics Engineer, Manager of Sales Promotion, Market Research and Production Development, and Sales Manager of Plastics Division.

Mr. Neylon has had training in art, design and color harmony and keeps abreast of the work of modern industrial designers, many of whom he has worked with.

In this work for Allied, Mr. Neylon will specialize in serving those firms which have had difficulty in solving their technical problems. Mr. Neylon is married and lives at 5 E. 194th St., Euclid, Ohio.

International Trade Fair, Chicago

The first U. S. International Trade Fair will be held in Chicago, Ill., August 7 to 19, 1950. Col. John N. Gage, commanding officer of the U. S. Army Quartermaster Depot in Chicago, has been named Managing Director of the Fair. Present address of the Fair is Merchandise Mart, Chicago 54, Ill.

By actual test

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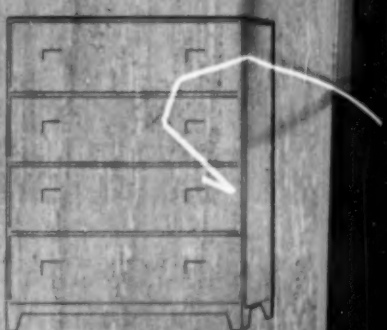

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NEW FINISHES that do a better job at *lower* cost are the constant aim of Du Pont. DUCO Penetrating Primer, for example, now gives lacquer-finished furniture unusual scratch resistance. See how the gouges of the panel stopped when the coin reached the side which was undercoated with DUCO Penetrating Primer.

EVERY NEW FORMULA gets "the business" in the Du Pont test laboratories before it is released for commercial use. In the salt-spray cabinet test, as shown above, a DULUX Marine Finish candidate takes a sample treatment of what it must sail through with flying colors to win a place in the Du Pont DULUX Marine Line.

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Matching Gumwood to Mahogany With

Padding Stains

By Daniel Derogee
Foreman Finisher

GUM WOOD can be matched to mahogany by the skillful use of lacquer padding stains. Padding stains are transparent. Although lacquer shaders are all right to use on medium and low priced furniture, I prefer not to use them on the more expensive furniture because a lacquer shader tends to hide the grain, and sometimes it gives the finish a muddy appearance.

Suppose, for example, we have a mahogany cabinet with gum wood base and moldings, to be finished in a uniform color. Many finishers will work on the theory that the gum wood must be treated with a darker shade of stain or a lacquer shader. It has been my experience that neither method works out too well. When using two different stains on one piece of furniture it is difficult if not impossible to prevent some of the gum wood stain from being sprayed onto the mahogany, causing the mahogany to turn too dark.

Mahogany Faced Doors on Television Cabinets

Lacquer shader, as mentioned before, will produce a muddy looking surface if too much is used. I am presently engaged in finishing some of the higher priced television cabinets. The mahogany-faced plywood doors have gum wood moldings glued onto their front sides. Also, the bases, inside moldings and rims around the tops are made of gum wood. It is my job to see to it that these cabinets are finished in a uniform color; in other words, an all-over rich-looking mahogany finish. *I solved this problem by using a lacquer padding stain to match the solid wood moldings with mahogany face veneers.*

Stain All Over with Mahogany NGR Stain

First, the cabinets are stained all over with a mahogany color NGR stain. After the proper drying time has elapsed, I spray on a wash coat of orange sealer, cut 100% with lacquer thinner. Again a period of drying time is allowed; then the cabinets are lightly sanded with No. 7/0 sandpaper, care being taken to sand with the grain, as cross scratches will show after the filling operation.

All narrow spaces and moldings are lightly rubbed with No. 3/0 steelwool. Then all mahogany ve-

neers are filled with a 4-hour mahogany filler. For the gum wood, an oil wiping stain the color of the filler is used. When the filler is thoroughly dry—after the excess filler has been properly wiped off to leave a clean surface—a coat of 21% solids sealer is sprayed on. We allow about two hours of drying time; then the surfaces are properly sanded.

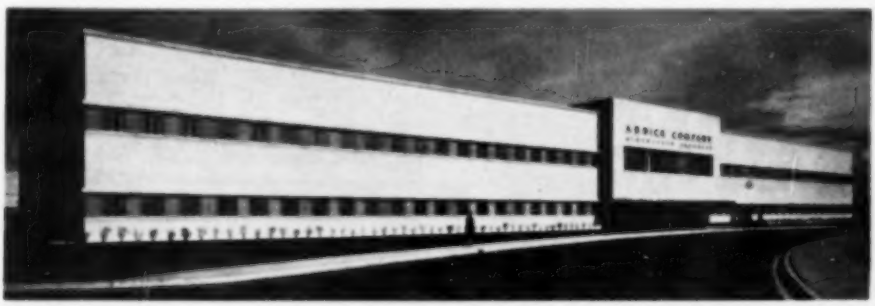
Preparing and Applying Glaze and Padding Stain

Next comes the glazing operation. The glaze is cut about 75% with glaze reducer and it is fogged on with a spray gun, using a pressure tank with agitator to keep the pigments in constant suspension. Then we proceed to blend the glaze with a soft blending brush. Very little wiping will be needed if just enough glaze is fogged on, and a lot of time can be saved. The glaze is allowed to dry for about six hours.

Now we are ready to apply the padding stain. This stain—it is a concentrated padding stain—must be exactly correct in color. I take the four basic colors—red, orange, yellow and blue-black—and intermix them until I obtain the correct shade needed to match the gum wood to the mahogany. This color must be considerably darker than the original NGR stain. After the correct color has been obtained, a wet sample can be sent to the supplier of finishing materials. The laboratory man will match this sample and keep a record for future reference. The stain is skillfully sprayed over the glaze coat.

Result: A Clear Sparkling Finish

It is surprising how much gum wood can be made to look like mahogany by using this method. It produces a clear sparkling finish—much clearer than if a lacquer shader were used. Another thing I like about it is that this stain will not darken the mahogany enough to change its original color. It dries almost immediately and no waiting period is required before a coat of lacquer is sprayed on. The method just described is also excellent for use on mahogany tables that have gum wood bases.



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Skilled craftsman laying Dutch metal leaf on a picture frame that has ornamented corners.

LAYING *Dutch Metal Leaf* ON PICTURE FRAME MOLDINGS

IF THERE IS such a thing as combining real art and mass production, Vilas-Mages Co. of Chicago has succeeded in capturing the technique. Here men prepare the wood surfaces and lay Dutch metal leaf with all of the craftsmanship and artistry that metal leafing requires, yet through organization and specialization they accomplish mass production.

Work is divided into two groups —leafing wood moldings in lengths of six to twelve feet, and ornamenting and leafing assembled frames for pictures and mirrors.

Preparing Wood Moldings for Metal Leafing

Preparation of wood surfaces for laying Dutch metal leaf is somewhat different from the procedure

necessary for laying genuine gold leaf. However, the surfaces of wood moldings must be made smooth before applying any kind of metal leaf. The first step in preparing wood moldings for application of Dutch metal leaf* is to place them face side up, side by side, and resting on sharply pointed metal pins on a long work table. A sufficient number of cross members containing the pointed pins must be used to adequately support each molding along its full length, so there will be no appreciable give or bend of the wood as the operator applies the shellac base.

Using a cheesecloth pad well saturated in pigmented shellac†, the operator rubs his pad against the face of the molding as he walks back and forth the length of the work table. Of course, the pad must be dipped into shellac for each molding—and for wide faced moldings 12-ft. long, the pad may require replenishing at the half-way mark. In this case the operator starts padding-on shellac at the opposite end, to avoid a build-up of shellac in the center. As in French polishing, the pad must be kept in constant motion as long as it is in contact with the wood surface; otherwise it will stick to surface and cause a rough place.

Viscosity of the shellac must be carefully controlled as this operation proceeds; when the shellac becomes too heavy, alcohol is added to thin it; otherwise the pad will have a tendency to drag or pull, resulting in an uneven coating. Three coats of shellac are padded on,* allowing overnight drying between each coat. It is better to apply three thin coats than to attempt to do the job with two heavy coats.

Gilder's Oil Is Put On Over Shellac Coating

After the third coat of shellac has been padded-on and has dried overnight, moldings are again placed on the work table where they receive a light coat of slow-drying gilder's oil (yellow in color), padded-on in exactly the same way as shellac was applied. It is highly important that this coat of gilder's oil be uniform and fairly light.

Experience and skill are necessary to determine the amount of pressure to be exerted on the pad as it is moved along the molded surface. Also, care must be taken to see that gilder's oil covers the entire profile of the molding, regardless of what that profile may be. I might add here that the same thing applies to the padding on of shellac coats.

After the moldings on a work table have been coated with gilder's oil (there may be five to seven wide moldings or ten to twelve narrow moldings) each one is carefully placed in tiered rack trucks so that nothing comes in contact with the

*An alloy (mixture of two or more metals) that has the appearance of deep gold. It is hammered or rolled thin to make metal leaf, but it can not be made as thin as genuine gold. It costs less than gold. It tarnishes or discolors if exposed to the air, therefore after Dutch metal (sometimes called schlag) leaf has been applied it must be protected with a thin coat of clear finishing material.

†A shellac darker than orange shellac. At the factory where I obtained material for this article, it is simply called "pigmented shellac".

*Metal leafers call this "polishing" with shellac, but I believe that other finishers will understand the operation better if it is referred to as "padding-on".

oil coated surface. Oiled moldings must air dry from eight to twelve hours before the oil coating becomes sufficiently tacky to receive metal leaf.

Technique of Putting On Dutch Metal Leaf

Dutch metal leaf is somewhat thicker than gold leaf, and it comes in sheets 5½-in. square. With normal laps and waste, the 25 sheets in a book will cover about 4.3-sq. ft. of surface.

When the oil coated surfaces of moldings are at the right degree of tackiness, the operator places a molding on the work table and begins to apply metal leaf. Using a gilder's cushion* and knife, he determines the correct width to cut the leaf—that is if cutting is necessary. The leaf is cut with a gilder's knife as it lies on the cushion. (The knife doesn't need to be sharp to cut metal leaf.) After cutting the metal leaf to width (when or if necessary) he uses a gilder's tip (a thin long-bristled brush, or a thin wood shape with velvet covered edge) to pick up one piece of leaf at a time and transfer it from the cushion onto the tacky surface of the molding.

Nearly all expert leafers brush the gilder's tip over their hair or cheek to charge the bristles with static electricity sufficient for the leaf to cling to the tip—or they may blow a leaf over the edge of the velvet tip. If the molding is wide and contains deep coves, it may be necessary to lay on two widths of leaf to be sure that the entire surface will be completely covered. [*Continued page 83*]

*A small flat panel or palette covered with velvet. On this "cushion" the workman places his supply of new sheets of metal leaf to be used.

Preparing long lengths of wood molding stock for metal leaf by padding-on a shellac base. The operator wipes on shellac as he walks along the entire length of each molding.

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When a complete molding is covered with metal leaf, a soft cheesecloth or cotton pad is used to lightly but firmly press the metal leaf down into sunken areas so that it makes close contact with the entire molded surface. Overhanging pieces of leaf (called skewings) are lightly brushed off with this same pad.

After drying overnight, leafed moldings are again placed face up on the work table. Using a cheesecloth pad, the operator smooths out the joints in light burnishing action and cleans the surface perfectly. Then he pads on a coat of tinted orange shellac in the same manner that was used in preparing the molding to receive metal leaf. Padding shellac on these leafed moldings is a highly necessary operation, for Dutch metal leaf must have a protective coating to prevent discoloration due to exposure to air and light.

Backs of the moldings, where no metal leaf has been applied, are spray coated with a metallic paint that closely matches the color of the metal leaf applied to the face sides.

Highlighting and Antiquing Metal Leafed Surfaces

There are several ways in which metal leafed moldings can be toned and antiqued. It would be impractical to attempt to describe all of them in this article. However, here are a few:

To produce an appearance of great age, the leafed molding is placed face up on the bench. A workman, using a sharp rigid-backed knife, cuts across the leafed face of the molding in various places, making no attempt at even spacing or perfectly straight lines. These cross slashes produce the effect of cracks in the leaf, simulating real cracks in old frames due to expansion and contraction of the wood over many years.

Applying thin brush coat of shellac to a picture frame that has ornamented corners.

To simulate old gallery frames, some moldings are purposely fly-specked. This effect is produced by dipping a long bristled brush in a black alcohol stain then, as the operator walks along, he flicks the bristle ends with his forefinger to spatter tiny drops of the black stain onto the metal leafed surface. There is a knack to this operation to get just the right number of specks—neither too few nor too many—scattered along over the surface.

Other leafed moldings are lightly scratched with steelwool; then a black stain is padded-on, followed immediately by wiping the leafed surface. The black stain remains only in the indentations caused by light scratches.

Finally, all moldings are moved to a spray booth where the metal

Operator has supply of Dutch metal leaf on a cushion (velvet-covered panel or palette) which he holds in one hand, while in the other he holds a brush to pick up a sheet of metal leaf and place it on the prepared face of picture frame or mirror frame molding.

leafed surfaces receive a protective coat of clear lacquer or some other suitable clear coating. When dry, they are carefully wrapped and packed for shipment.

Applying Metal Leaf to Picture Frames

In applying Dutch metal leaf to picture frames, workmen follow the same sequence of preparatory operations just described, except that the shellac (three thin coats) is brushed on instead of being wiped on. The same goes for the coat of gilder's oil. Many of these frames have composition ornaments (like intricate carvings or embossed work) and it is highly important for these ornaments to be carefully and completely coated with shellac and with gilder's oil. The close "pockets" within and around ornaments must be adequately sealed with shellac, yet these pockets must not be flooded. In the application of gilder's oil, the same rule follows; a surplus of oil in these areas would not air-dry sufficiently to become tacky to receive the metal leaf.

Metal leaf is applied to picture frames in the same way as on long moldings, except that to reinforce carvings and complicated ornamental areas, two or more leaves of metal may be laid on. A long bristled brush is used to dab and pat the leaf into the depressions of ornaments. This same brush is used to remove skewings around the ornaments. Skillful strokes with soft cheesecloth pads clean up and skew the remainder of the frame. Finally, skewings are picked up on the pad and rolled gently but firmly over the ornamental areas to make sure that metal covers every bit of the surface. Then the frame is allowed to dry overnight.

Next day the ornaments are brushed out, and all flat and molded areas are expertly padded to smooth out and burnish the metal leaf covering. I might add here that Dutch metal leaf is never burnished with an agate burnisher, such as is used on gold leaf. The metal-leafed picture frame is "mat sized" by brushing on a coat of tinted orange shellac.

Various effects are possible through changing the color of this mat sizing. The face surfaces of frames are then antiqued in much the same way as molding stock is treated. This is followed by a final protective coat of clear lacquer over the entire frame. This finishes it.

Since its inception, Wolverine has specialized only in high quality finishes for wood and metal. Leading manufacturers now testify to the uniform, high quality of its materials, and to the dependable and prompt service which Wolverine renders at all times. Inquiries are invited.

Specializing in **HIGH QUALITY** *Furniture and Metal* **FINISHES**

Wolverine Finishes
CORPORATION
836-50 Chicago Dr., S.W., Grand Rapids 9, Mich.

Grand Rapids Varnish Corporation
ANNOUNCES

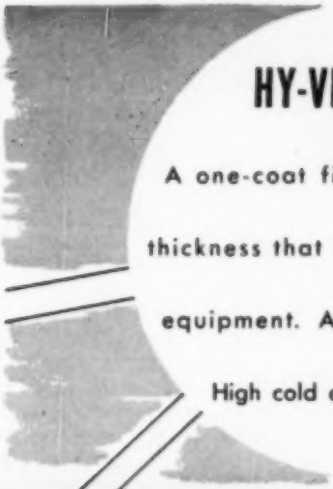
THERM-O-LAC

An entirely new "hot lacquer" that offers you never-before-achieved advantages for *more* SAVINGS, *more* QUALITY and *more* PRODUCTION.

3 NEW

CHEM-VEER

Unequaled advantages of a finish tough as rhinoceros hide that defies mars, scratches, liquors, even hot plates and nail polish remover! Yet can be repaired by dealers (if damaged) by currently used methods. Water white, non-yellowing; one coat application dries at room temperature ready to rub in a few hours.



HY-VIS-O-LAC

A one-coat finish of dual-coat thickness that requires no special equipment. Any sheen desired.

High cold check resistance.

SENSATIONAL FINISHES!

Destined to Revolutionize all Previous Concepts of fine furniture finishes for Visible Beauty — Demonstrable Quality and Time- and Labor-Saving Economy of Application.

Manufacturers!

If you would like a demonstration of these revolutionary new finishes without obligation, of course, please wire or write to

GRAND RAPIDS VARNISH CORPORATION

GRAND RAPIDS, MICHIGAN

Makers of the Famous **Guardsman** *Finishes*

Random Comment on the Industrial Scene

(Continued from page 8)

after work. Renovating can be done whenever the need arises. The absence of unpleasant paint odor also makes for increased efficiency in several ways.

* * *

Portable Bag Filler. This automatic filling and sealing machine may be used for sealing a limited number of nails, screws or fittings in small envelops. It weighs 750-lbs., and is said to perform as much work as four hand operators.

K. D. and packaged furniture manufacturers take note.

* * *

Strong Tape of the pressure sensitive variety has been introduced. It has a tensile strength of 500-lbs. per inch of width. It is made of an acetate film with small glass filaments running lengthwise in a rubber adhesive that is shock proof. It is strong enough to tie up steel pipes weighing several hundred pounds.

* * *

Shellac Standards will soon be published. At a 4-day meeting held in New Delhi recently, technical committees of the International Organization for Standardization on Shellac and Mica reached a substantial agreement on international standards for both products.

It is interesting to note that India produces about 90% of shellac and 80% of mica. The United States uses about 50% of both.

Standardization makes for stability, therefore it is always welcome.

Better Paint Adhesion—
Fewer Operations!
KLEM-KOTE
RINSE
PAINT
That's what you get with Klem-Kote, the revolutionary new phosphate coating. Here's what automotive and appliance manufacturers say, after actual tests in their plants:
"Klem-Kote, used in a three-stage spray washer system, gives paint adhesion and salt spray resistance equal to, and in most cases superior to, other phosphate treatments in complex five and six-stage rust-proofing systems."

Klem-Kote cleans, conditions, rust-proofs, in one operation . . . eliminates extra stages . . . saves time, material, heat, labor. Here's a typical spray washer process, using Klem-Kote in *ordinary steel equipment:*

1. Klem-Kote at 1½ oz. per gal. water; temperature 170° to 180°F.; time, 1 minute. **2.** Rinse. **3.** (Optional) Hot Rinse.

Simple . . . but effective . . . with non-toxic, non-fuming Klem-Kote leaving a fine, iridescent, crystalline, tightly-adherent, complex phosphate coating—a perfect paint bond! Eliminate complicated, costly, six-stage or inadequate three-stage systems you may now be using. Let Klem-Kote help you save, reduce rejects and improve the finish of your products.

There is a Klem Field Service Engineer in your area. Write now for complete information on how Klem-Kote can solve your particular finishing problem quickly . . . and economically.

Klem-Kote is equally effective on steel, iron or aluminum surfaces, suitable for immersion or spray process. Shipped in 100 lb. or 400 lb. drums.

KLEM Chemicals Inc.

OFFICES IN PRINCIPAL CITIES

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LICKING THE HAZARD

IN THE *PAINT SPRAY BOOTH*

"Buffalo"

AXIAL FLOW FANS

with non-sparking wheels

"Buffalo" Axial Flow Fans are widely used on paint spray booth exhaust because they require little space, yet do a thorough, continuous job. You have an economy of installation, plus assurance of dependable, economical performance. WRITE FOR BULLETIN 3533-C, left, and get "Buffalo" advice on how to handle your paint spray booth hazard with minimum trouble and cost.

BUFFALO FORGE COMPANY

532 Broadway Buffalo, New York

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

Branch Offices in All Principal Cities

Say Miskella, Infra-red Lamps Last Longer Than That!

Let's refer to Mr. W. J. Miskella's article on the combination infra-red and gas oven, which appeared in January issue of INDUSTRIAL FINISHING, beginning on page 10.

On page 18, in the second column, without any qualification as to how they were used, the general statement is made that one is fortunate to obtain a useful life of 1000 hours for the 375-watt lamps, and it is probably shorter for lamps of 500-watt rating, with the implication that the lower service life figures apply to infra-red lamps generally available, such as General Electric.

As far as our lamps are concerned, the rated lives are the same (in excess of 5000 hours under laboratory conditions) for the three wattages mentioned, and reports from the field do not substantiate the performance differences to which Mr. Miskella refers. — C. E. EGELER, Lamp Dept., General Electric Co.

. . . We will let pass his statement, "So here for the first time, to my knowledge, we have a convection gas oven teaming up with, etc. . . ." Miskella may not be completely up to date; but ever since its inception as an industrial tool infra-red has, on occasion, been used as a supplementary source of heat to speed up convection ovens.

However, when he makes such statements as he did about infra-red lamps being unable to deliver, economically, temperatures beyond 460° F., he may not be thinking about the units of other manufacturers who have installed jobs that operate completely satisfactorily for their owners. The word "economically" is purely relative; what may be economical in one plant may be uneconomical in another.

We know of an installation where 1000-watt T-40 lamps operated for 10,000 hours, without one failure; and they may still be going strong. We have not checked since the 10,000-hour life has been passed.

In another place the author went on to say that 600° F. heat was required for a 2-minute cycle, so an insulated gas oven is used instead of infra-red; and then continued to say that although 600° F. air temperature is used in the oven the product will be heated to only 380° F.

You know it is not unusual in an infra-red oven to get product temperatures of 380° F.; and such temperatures are constant, regardless of conveyorization of the product . . .

There may be other statements in the article which we would question, but the above may suffice to register our disapproval.—PAUL H. KRUPP, The Fostoria Pressed Steel Corp.

. . . We criticize . . . printing the article in the January issue, by Mr. Wm Miskella without screening it to eliminate statements that are detrimental to the infra-red industry.—J. E. SUMP, Jensen Specialties, Inc.

. . . Among the many detrimental statements to the infra-red industry, we are especially concerned with the remarks made by Mr. Miskella on page 18 concerning the life of infra-red lamps . . . May we point out that industrial infra-red lamps, manufactured by any reputable company, will average 5000 hours or better.—DOUGLAS HILL, Amplex Corp.

Flow Meter Wanted

We are interested in securing a flow meter for measuring the amount of finishing materials used in spray guns when finishing furniture. Do you know of the manufacturer of such a flow meter? What we have in mind is a portable meter to be inserted in the hose between the drum and the gun, so that the amount of material can be measured on an individual piece of furniture.—L. FURN. CO.

Try S. F. Bowser & Co, Ft. Wayne 5, Ind., or Buffalo Meter Co., Buffalo, N.Y.—ED.

A Cleaner Called "Tone"

We understand there is a cleaner marketed under the name of "Tone", to clean rubbed surfaces before packing. Could you tell us who manufactures this product?—H. CO.

Never heard of it. Can some reader tell us?—ED.

For Vapor Degreaser

We are faced with the problem of finding a chemical suitable for use in our vapor degreaser. In our paint shop we have a vapor degreaser which is used for cleaning all of the metals used in our production before painting. The chemical

Announcing Increased Production of.....

A SIMULATED PEARL ESSENCE

Made by the manufacturers of the well-known MEARLMAID PEARL ESSENCE

It is—

- **Stable**
- **INERT**
- **NON-CORROSIVE**

It is formulated in the same proportions as Pearl Essence.

NACROMER is an excellent substitute for Pearl Essence where cost is a factor and where the high brilliance of natural pearl is not necessary.

SUGGESTED USES: Novelty Jewelry; Flowers; Simulated Pearls; Statuary; Casket Hardware; Golf Club Handles; Automobiles, etc.

Sample of NACROMER sent on request.

THE MEARL CORPORATION

153 WAVERLY PLACE NEW YORK, N. Y.

"World's Largest Producer of Pearl Essence"

which we are now using comes to a boil at 212° F. The principle is to remove any oil or other foreign substances that are found on the metals.

Due to your vast experience and knowledge in the finishing lines, we are sure that you would be in a position to supply us with the solution to this problem, or be good enough to furnish us with the necessary leads in this connection. This problem is one which we would like to settle with the minimum of delay.—U.C.L.

In a letter we are naming concerns that specialize in supplying materials and service for this operation.—ED.

Flock Finishing

I am interested in obtaining information concerning a source of supply for the materials and equipment used in the finishing process of "flocking". Any information you may have on the above, or the technique of the process, would be greatly appreciated.—G.C.W., Consulting Engineer.

Several articles and advertisements on this subject have appeared in I. F. In a letter to you we are enclosing tear pages of some of them.—ED.

Wet Film Thickness Gage

We would appreciate your advising us the name of the manufacturer of the gage termed "Interchemical Wet Film Thickness Gage".

This information was in the March issue of INDUSTRIAL FINISHING Magazine, but we have mislaid our copy and are unable to locate the name of the manufacturer of this gage.—N.S.M.Co.

Contact Henry A. Gardner Laboratory, Inc., Bethesda 14, Md.—ED.

Lacquering Lead Pencils

It has come to our ears that in one of the editions of your periodical INDUSTRIAL FINISHING, a description is given of mechanically lacquering pencils. Being very interested in this process, we would appreciate it if you would kindly let us have a copy of the edition in which the said description is given.—V.D.D.&F., The Hague, HOLLAND.

The article appeared in June 1949 issue. We are sending tear sheets of it.—ED.

License Plate Finishing

The man in charge of our Sheet Metal Plant, where our license plates are made, informs me that he saw in a pamphlet or similar publication issued by you, an article about installed infra-red license plate ovens in several Federal institutions in the states. However, the address of this firm was not disclosed. Would you be so kind as to inform me of their address, so that I could obtain information about these ovens?

The Electrical Department of the Provincial Government here has some data and I would like to obtain, from another firm, illustrations, cost, length of time needed for baking, etc., and any other pertinent facts that they could give me, as the matter of installation of infra-red ovens here is under advisement.—J.J.H., Bursar for Warden.

In a letter we are naming the concern we believe you have in mind; also, some others.—ED.

Where to Buy Dextrine

We are endeavoring to locate a sizing material, a white powder that is used in the proportion of 1-lb. to four gallons of water. This is used instead of glue and, as near as we have been able to find, the term used on a carton, part of the name being obliterated, is something like "Dextrin", or a similar name.—L. MFG. Co. (Memphis).

It's Dextrin or Dextrine. We feel sure that you can purchase supplies of this product in your city. Call up some of the concerns that deal in glues and adhesives, or finishing materials, or chemicals. This product has been in common usage among some woodworking factories for many years.—ED.

We Make Coatings for Cast Plaster Products

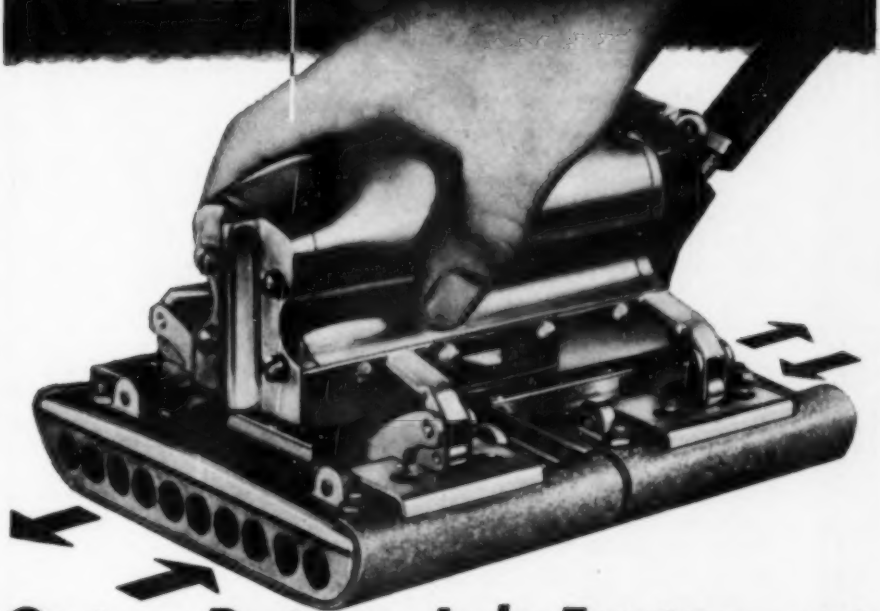
In February issue of INDUSTRIAL FINISHING, on page 78, we notice a request from "R. Artcraft Co.", regarding coatings for cast plaster items. We are currently manufacturing finishes for plaster novelties and would be glad to give your reader information regarding same.—THE P. D. GEORGE CO.

. . . We sell approximately 75% of the plaster people in the entire Midwest some if not all of their requirements in finishing materials. Our experience dates back to a number of years in this field and we are positive that we can recommend some help to the R. Artcraft Co. with their finishing problems.—ZARCO INDUSTRIAL FINISHES.

We Want Silk-Screen Alphabets

Referring to a paragraph in "Random Comment" for December 1949 issue of INDUSTRIAL FINISHING, page 114, we are interested in the Silk-Screen Alphabets mentioned. Would you please forward the name of the firm where literature on these

SAND BY AIR IN STRAIGHT LINES...



Get a Better Job Faster with this Sundstrand Opposed Pad Sander

● Here's your sander for production or maintenance work on wood, metal, plastic or composition. It's a sturdy air operated machine — easy to handle because of vibration-free action.

You'll save 50% to 70% on production sanding — wet or dry.

Pads reciprocate in a straight line and in opposite directions — grain structure can be followed easily, producing finer final finish.

If your work includes sanding of wood, metal or composition on production or maintenance work, write for free complete bulletins. Ask for bulletin IF-51.

SUNDSTRAND MACHINE TOOL CO.
PNEUMATIC MACHINE DIVISION
ROCKFORD, ILLINOIS, U.S.A.

HERE!

Are 13 Good Reasons Why YOU Should Know What The DE BURGH FINISHING SYSTEM Can Do for You

Installations made in recent months and successfully operating:

Craftique, Inc., Mebane, N. C.
Tomlinson of High Point, N. C.
B. F. Huntley Furniture Co., Winston-Salem, N. C.
Kent-Coffey Furniture Manufacturing Co., Lenoir, N. C.
Sherrill Furniture Co., Statesville, N. C.
Hekman Furniture Co., Grand Rapids, Mich.
Northern (R-Way) Furniture Co., Sheboygan, Wisc.

Now being installed or on order:

Trogden Furniture Co., Toccoa, Ga.
Hylan Furniture Co., Hickory, N. C.
National Furniture Co., Mt. Airy, N. C.
Mt. Airy Chair Co., Mt. Airy, N. C.
Mt. Airy Furniture Co., Mt. Airy, N. C.
Fancher Furniture Co., Salamanca, N. Y.*
*(Second DeBurgh Conveyor for their new Plant No. 3.)

Just as these responsible firms have profited, you, too, can learn how a DE BURGH FINISHING SYSTEM will save space and cut costs for you no matter whether production is small or large.

Investigate! **DeBurgh Conveyors**

Patented and Patents Pending

For Assembly, Finishing and Upholstery

1741 K St., N. W., Washington 6, D. C.

One Jump Ahead

. . . and that's how your product will be when it's finished with a distinctive coating prepared by our Creative Studio.

Yes, by virtue of appealing, decorative finishes, goods move faster . . . win greater consumer acceptance because their salient features are highlighted to the fullest.

If you feel that your merchandise needs this extra something to help keep ahead, send us a sample for finishing. Our artists will conceive a coating that is specially suited to your particular needs.

No obligation for this "show-the-evidence" service, of course.

No Tampering with Quality

ROCKFORD VARNISH *Company*

ROCKFORD, ILLINOIS

Manufacturers of Protective and Decorative Coatings

may be obtained, or forward to them our address and request information regarding the above?—G. SIGN & DISPLAY CO.

Our reference indicates that the firm is Fototype, Inc., 1414 Roscoe St., in your city (Chicago).—ED.

Where to Get Crack Eradicator?

In January 1950 issue, in an article on page 124, on checked finish by C. O'Leary, mention is made of an eradicator. As we are not familiar with this material, would you kindly let us know where it may be secured in United States or Canada? We thank you in advance and wish to compliment you on your magazine which is most interesting.—EASTERN FURNITURE, LTD.

. . . We have never heard of such a material and are wondering just what the nature of it might be. Any help you can give us on this certainly will be appreciated.—H. MFG. CO.

We are especially interested in knowing what a crack eradicator is, how it is sprayed and who can supply us with this material.—A.S.G. CO.

Try H. Behlen & Bro., Inc., New York 14, N.Y., and Finishine Laboratories, Syracuse, N.Y.—ED.

Solvent Reclaimers Everywhere

In response to your letter by F.C. in TEXAS (Jan. issue, page 90), there are many reclaiming plants located throughout the United States, to which spent lacquer thinners may be shipped for refining. We maintain a plant strictly for such customers and would be pleased to have you refer our name to inquirers in this area. We service for Wisconsin, Ohio, Illinois and Michigan. — SOLVENT RECLAIMERS, INC., Detroit 10, Mich.

Measures Tackiness, Not Thickness

On December 28 this office released a news item concerning a "new patented tack tester". The whole point of the item being that the device was for "measuring film tackiness".

If you will refer to page 106, right hand column, of your January 1950 issue, you will see where a misprint occurred in our item that makes it read, "a small, easy-to-operate device for measuring film thickness . . ." This has caused our representatives considerable embarrassment and resulted in a great deal of needless correspondence.

We would appreciate it a great deal if you would run a correction as soon as possible. This, perhaps, will right the matter in the minds of our customers and potential customers.—Atlas Powder Co.

Sorry. Typographical error.—ED.

Pearl Essence Lacquers

Chemical Abstracts advised us to contact directly with you and ask you if you may be able to mail us a photocopy of the article, "Facts About Pearl Essence Lacquers" by H. E. Mattin, published in the year 1932.—J. Ferre Baliarda, Buenos Aires, Argentina, S.A.

Inasmuch as this article appeared 18 years ago, we do not have extra copies of the magazine or even tear sheets to send out. We are sending you a copy of a more recent article on this subject. The article is entitled, "Pearl Essence", and was published in May 1949 issue of INDUSTRIAL FINISHING. We trust that you will find this of interest and value. For additional information on pearl essence, we suggest that you communicate with concerns that advertise pearl essence.—ED.

Want Wet-or-Dry Sandpaper

A subscriber of your magazine for several years, I am taking the liberty of requesting certain information. For over 20 years I have acted as exclusive representative for two well known U.S. paint manufacturers. My territory covers all of Mexico and Central America, Panama included.

My organization is taking up certain additional lines of similar nature but non-conflicting, and I am much interested to secure the exclusive distribution, for this territory, of a leading line of wet-or-dry sandpaper . . . I need an independent line.

I control several paint shops, garages, etc., and I am sure that if I secure a good line I will be able to push it successfully both in Mexico and in Central America.—L. G. GOODING, P. O. Box 30651 Admon 46, Mexico 18, Mexico.

In a letter we are naming several concerns that manufacture or supply sandpaper.—ED.

Where to Find "Infracote"

Please advise name and address of the manufacturer of "Infracote" plastic window coating mentioned on pages 6 and 9 of INDUSTRIAL FINISHING, January 1950 issue. We are interested in the use of such material on the south and west windows of our Engineering building.—G. M.C.

Our reference is The Lite Control Products Co., Nutley, N.J.—ED.

Wood Graining Machinery

We would appreciate it if you will send us a list of manufacturers of wood graining machinery. Please send the list to us, rather than have those manufacturers contact us, inasmuch as we have already contacted some of them.—A.H. MFG. CO.

Compounded Especially for the Metal Decorator

A new series of **Quick Bake** finishes that cure in 3 to 7 minutes have been developed especially for the Metal Coater and Lithographer by the Watson-Standard Laboratories.

This series includes sizes, base whites and wet print finishing varnishes for application by the roller coating method. They not only cure properly in quick bake cycles but also may be adapted to the conventional longer cycles of 10 to 30 minutes without discoloration.

Outstanding in the use of these coatings is the increase in production with lower operating costs.

Let us help with your coating problems. Write for information today.

THE WATSON-STANDARD CO.
225 Galveston Ave. Pittsburgh 30, Pa.

Luminescent Paints

Mr. Bardin: We have read with interest your article on "Luminescent Paints" (Dec. and Jan. issues). As you know, we manufacture a highly decorative line of compacts, cigarette cases and lighters. It has occurred to us that there may be some manner in which luminescent paints may be used on such products. Do you have any opinion in this regard?

Also, we appreciate having your advice as to the suppliers of such material. During the war, we dealt considerably with a Cleveland concern, the name of which we have forgotten.—W.C.Co.

I believe that fluorescent paints have a definite place in decorating compacts, cigarette cases and lighters. If the right colors are used with circumspection I believe it would add much to the beauty of your products.

I suggest that you experiment with an etched design over which daylight fluorescent colors are silk-screened to coat perhaps small leaves and flowers. Daylight fluorescent paints are brilliant under clouded light, sunlight or most incandescent, as well as black light. Also, this type of paint is quite adaptable to application by the silk-screen process.

Should you decide to go to phosphorescent paints, which glow after the light source has been removed, it will require a hand operation, as this material is too course to go through a silk screen and deposit a film sufficient to emit a flow. Therefore, for production, I suggest the fluorescent paints.

Perhaps the Cleveland Ohio source you have forgotten is Switzer Brothers, Inc., 4732 St. Clair Ave. One of this firm's products is sold under the name of "Day-Glo", and I believe it is available in any color you want. I do not think that ordinary fluorescent colors, which are activated only by black light, would be suitable for your purpose.—P. C. BARDIN.

Coating Bobby Pins

We hope that you will be able to help us with a problem that we are experiencing in the finishing of bobby pins. These articles are in two finishes—light brown and black. We are having difficulty in giving a really satisfactory finish to these two colors. We have experimented with salt baths for coloring and then dipping in a varnish to consolidate the color. We have also experimented with heat treatment coloring, again varnishing to consolidate.

Neither of these finishes is quite what we are after, and we are at the moment conducting experiments by tumbling.

It occurs to us that you may have the information at your finger-tips, or on the other hand, that one of your correspondents may be in position to give some assistance in the matter.—N.W.C., Durban, South Africa.

Two methods are suggested. One is to coat the wire, before it is cut and formed, with a suitable brown or black lacquer, or bake finish, formu-

Motor Caps *with* "Ear-Muffs"

Cotton Flock Sprayed On Inside Areas, Deadens Motor Sounds... Insures Quiet Operation!

When coated with Claremont Flock, the interior of this electric motor metal covering acquired a permanent, sound-deadening layer of uniform fibres. Industry's most versatile finishing material, Claremont Flock is a proven medium for industrial and novelty use. Can be applied to glass, wood, paper, metal, fabric or plastic of any shape or size... quickly and economically. Investigate Flock's possibilities and many advantages. Write Claremont today!

CLAREMONT FLOCK SAMPLES & DETAILS UPON REQUEST

CLAREMONT WASTE MFG. CO.
CLAREMONT, NEW HAMPSHIRE

lated to stand bending. Wire coating equipment may be obtained in this country.

The other method may be centrifugal finishing of the pins after they have been formed. By this method the pins would be loaded into wire mesh baskets, dipped into tinted lacquer and whirled to throw off the excess material. Pins are then dumped from the work baskets into wire mesh trays for air drying. The same machines may be used if you plan to have a baked enamel finish. However, I should think that a low-solids tinted lacquer would answer the purpose. Centrifugal finishing machines have been illustrated and advertised from time to time in this magazine.—P.C.B.

Finish Turns White and Brushes Off

We are making custom-built kitchen units and are confronted with a problem on which we would like some advice. The process we use to produce the finished product is as follows:

1) Sand all parts smooth; blow off dust; apply filler; wipe off excess filler.

2) Spray first coat of sealer; then sand lightly.

3) Spray second coat of sealer; then sand lightly.

4) Spray two coats of clear gloss lacquer.

Up to the last several cabinets we have installed, we have had no trouble with the finish, but now at the edges of the doors the finish seems to turn white and brushes off like powder. We have used ¾-in. red birch 7-ply doors and also red birch lumber core, and it seems to do the same thing on both of them.

If there is anything you can tell us regarding this situation and how we can overcome it, we would be pleased to hear from you. We have re-sprayed some of these doors and drawers and they are doing the same thing over again.—H. WOODCRAFT CO.

In connection with your finishing difficulty, two things come to my mind. First, the possibility that the white finish on the edge of doors, which brushes off, may be ordinary spray fog. This will collect on wood fibers that project from the surface and will form a whitish deposit which readily wipes off. It is caused by what is often called "dry spray."

Your lacquer may be too thick or too cold when sprayed. In cold weather, unless lacquer is at room heat when used, it is often "too thick" to spray properly, even though it appears to be all right in warm weather.

Holding the spray gun too far from the work will also cause dry spray. Insufficient air, often caused by poor efficiency of worn compressors in cold weather, may be a contributing factor.

The remedy, in most cases, is obvious. If the lacquer is too thick, thinning slightly with lacquer thinner or warming it to room temperature may do the trick. Properly applied, lacquer should be given a uniform wet coat over all surfaces.

The second thing that comes to mind is the common difficulty of blushing. This condition often shows up at corners and edges, where air velocity is high. It is caused by moisture, either in the air or in the wood. When lacquer is applied, the evaporation of solvents cools the film and the air just over it. If the air is moisture-laden, some moisture may precipitate or condense on the film, which absorbs it to form a witish emulsion.

The remedy is to use a little lacquer retarder in the lacquer to slow down solvent evaporation, or to heat the air in the room. Often warming the room just a few degrees will stop the trouble.

This is by no means an uncommon difficulty, but it is easy to stop. Where

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. . . any metals!

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BAKING ENAMELS

- *Surpassing in adhesion — flexibility — impact tests*
- *Superior in color retention — workability — speed of cure*
- *Unaffected by alcohols, fats, greases, household alkalies and acids*

Syn-Por Baking Enamels hold their initial whiteness and color. Their great resistance to marring, adhesion and flexibility on metals has made these enamels FIRST CHOICE wherever usage is severe. That is why they are specified by manufacturers everywhere for kitchen cabinets, lawn furniture, washing machines, office furniture, venetian blinds, bicycles and other products made of metal. If you are a manufacturer of similar products that need a durable, fast-curing enamel of unusual workability, investigate Syn-Por Baking Enamels.

Write for detailed information and sample panel.

Available in White and Any Color.

SYN-POR DURO FINISH

O'NEIL DURO COMPANY

MILWAUKEE 7, WISCONSIN

it has already occurred, spraying on a mist coat of lacquer thinner will often bring it out; or applying another coat of lacquer, thinned somewhat, will bring it out.

I hope these suggestions will aid you in solving your difficulty.—ROLLIN H. WAMPLER.

Your trouble could be caused by too heavily-stearated sealer being applied. Sanding residue (stearate dust) is possibly not wiped off the edges and is bleeding through a possible thin coat or coats of gloss lacquer on edges or other parts.

Solution: Obtain a sealer that is not so heavily stearated and apply only one coat. See that all parts of the surface are free from dust before applying top coats. Apply wet coats evenly over all surface areas.

Solvents may be causing the trouble too. Put three or four ounces of retarder to the gallon of both sealer and top coats. This will slow down evaporation of solvents and prevent minute blistering which causes film breakdown.

Perhaps the excess filler has not been completely wiped off the edges. If natural filler is used, this will powder up when dry and turn gray. Succeeding coats will powder or peel under this condition, according to the amount of filler that is not wiped off.

Personally, this problem has all the earmarks of stearate and solvent trouble, plus poor spraying.—FRED BOYNTON.

Gold Leaf Spraying

MR. BARDIN, Associate Editor: We have noticed a most interesting article of which you were the author. It appeared in July 1947 issue of this magazine and was titled, "Gold and Metal Leaf Applied to Fine Frames", and described various finishes used by the Newcomb-Macklin Co. In reading this article it just occurred that you might be a big help to us.

We manufacture large quantities of leaf moulding, using schlag aluminum and schlag metal leaf, most of which comes in 6¼-in. squares. We import this from Italy and Germany.

In preparing our wood moulding for this we put on a mud undercoat and then cover this with several coats of shellac. This is applied by hand, each coat being allowed time to dry. We put our gilder's oil over this and then lay the leaf.

We understand that some company manufactures a gold leaf lacquer which can be applied by spraying, thus eliminating all of the hand shellac work that we are now doing. We would appreciate it if you would steer us to the manufacturer of this product.—G.A.Co.

I do not know of any firm that produces a material which can be sprayed on wood moldings to equal metal leaf in quality of finish. I have seen some gold lacquer applied by spray; also, a clear coat of lacquer or synthetic enamel sprayed on, and before it is dry, gold powder is dusted on the wet surface. This is dried and then the surface is burnished by light strokes. However, none of these are quite equal to a genuine metal leafed surface; they merely approach it.

In your operation I see no reason for the mud undercoat, if you have smooth machine work on the moldings. If you have a smooth surface to start with, two or three coats of orange shellac, wiped on in a manner similar to French polishing, should give you a satisfactory surface to receive the gilder's oil. This wiping operation is extremely fast, as the operator walks along holding a cloth saturated in shellac against the face of the molding. With several moldings placed on the work table, he walks back and forth until all mold-

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As experts with many years of experience Young and Bertke engineers can show you how to effect substantial savings in your finishing department.

We design, manufacture, and install finishing systems, ovens, spray booths that will do the best possible job for you at the lowest cost.

This is no idle boast. Your best guarantee of our ability to help you is our record of saving among leading manufacturers where we have installed finishing systems recently. Let us show you how we can help you, too. We would like to consult you on your ovens, spray booths, fume, dust removal or complete finishing systems.

OVENS — SPRAY BOOTHS — FINISHING SYSTEMS

The YOUNG BERTKE Co.

1126 BUCK STREET CINCINNATI, OHIO

ings are coated. These are removed and others are placed on the table. In just a few hours, a second wipe coat may be applied. The resulting surface is satisfactory.—P. C. BARDIN.

The Term "Alkyd"

An inquiry has been made of us regarding the derivation of the term, "alkyd". I have made a high-spot search . . . but there seems to be no information regarding derivation of the term used to describe this class of polymeric reaction products of polybasic acids or anhydrides and polyhydric alcohols.

I wonder if you have references on file giving information as to the derivation of the word "alkyd" and, if possible, the author of the term?

As you know, the word glyptal is sometimes used to describe this same class of resins, but I understand that this is (or was) a trademark of the General Electric Co. and hence properly should be capitalized and italicized, or enclosed in quotation marks, or otherwise identified as a brand name. The word "Glyptal" evidently was derived by combining certain letters from the words glycerol or glycol and phthalic anhydride.—R.S.

As you probably know, Dr. Roy H. Kienle, who is now a member of the research staff of the Calco Chemical Division of American Cyanamid Co. is the father of alkyd resins. The Kienle patents have been basic, although they have been hotly contested through the years. Kienle developed alkyd resins when employed by General Electric several years ago. I happen to know Dr. Kienle very well, and when your request came in, I called him on the telephone. Here is the story he gave me:

It was realized that the general combination of polybasic acid and polyhydric alcohol offered a tremendous possibility for a wide variety of substances based on the alcohol-acid combination, and it was believed necessary to coin a generic term that would cover this class of substances. The first word that came to Dr. Kienle's mind was "alcid". Obviously, the "al-" was derived from alcohol and the "cid" from acid. However, those concerned at the time felt that "alcid" was a horrible name so they borrowed from the Greek, converting the "c" to "k", and changed the "i" to "y", and "alkyd" was the result.

You may take this as being completely authentic since it came from the originator of the term himself.—PAUL O. BLACKMORE.

To Finish Wood Backs of Thermometers

A concern that makes household thermometers wants to use roller coating to replace the old method of brushing by hand. However, a few problems are apparent. The dimensions of the thermometer backs range from 6 to 15-in. in length, 1¾ to 4-in. in width and ⅜ to ½-in. in thickness. Some backs have straight edges, some are round and others are molded. Also, how would the edges and ends be efficiently coated? Basswood is the most prevalent wood used. It may be well to add that clear finishes as well as colored enamels will be used.

Any information you are able to furnish regarding this finishing problem will be greatly appreciated.—M.B.

Why roller coating? The sizes and shapes are not adapted to roller coating. Roller coating is limited to coating one or both sides of strictly flat stock of uniform thickness—flat sheets or flat panels or long flat strips that may or may not wind up on coils—

Protective finishes . . .
at 4 cents per square foot

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MICRO-CUT FIBERS

Here is a "no-waste" flock finish for flat or three-dimensional surfaces. It's a pile fabric-like protective coating that can't peel off—as easy to apply as a coat of paint—makes harsh surfaces "mar-proof"—and at the same time "dresses up" your product with sales appeal.

BEHRLON micro-cut new rayon fibers are available in 34 attractive standard colors. Send us a product sample for free BEHRLON-izing. Prompt return with detailed application information will be made. Then, you can appraise its merits—see its beauty—"know" its worth.

Send for our free brochure "BEHRLON Micro-cut Fibers" with application information and color swatches. Write today.

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like, for instance, metal Venetian blind slats in continuous lengths.

The logical way to coat these wooden backs for thermometers would be dipping (in multiple) or spray coating them in multiple.

In the spray coating method the operator would simply place several of the backs on a wire mesh tray; he would spray one side and part or all of the edges and ends; then, when this side is dry, he would turn them over and spray the other side—and the remaining edges, if any. In spraying, of course, he would use a thin light material and comparatively low air pressure to avoid blowing the pieces off the tray—or he could press the pieces against strips of face-up masking tape fastened to the wire tray. The masking tape would hold them in place.—C.F.C.

Porter-Cable Training School

The Porter-Cable Machine Co., Syracuse, N.Y., recently began to award "sheepskins" to new field representatives who complete their course of instruction in the firm's Sales Training School. The men receive the degrees of M. G. (Master of Guild Tools) and D. S. (Doctor of Speedmatics). Porter-Cable manufactures portable electric tools which are sold under the trade names "Guild" and "Speedmatic."

Recent graduates of the Training School.

The certificates bear the names of John A. Proven, "Exhalted Ruler of the 'Knights of the Road' ", who is Vice President in charge of Sales for the company; John I. Dean, "Dean, Dean, Drummer Extraordinary", who is Mr. Proven's assistant and directs the program of the Training School; and Robert Ingraham, "Professor of Miscellaneous and Sundry Mechanics," who is Sales Training Instructor of the Company. The new idea was instituted by Mr. Proven.

H. D. Braitberg Joins Allied Finishing Specialties Co.

The Allied Finishing Specialties Co., 2601 W. Grand Ave., Chicago, Ill., announces the appointment of Mr. H. D. Braitberg to its Chicago sales staff.

Mr. Braitberg is a graduate of the Illinois Institute of Technology, having received his B.S. in chemistry in 1941. He is also a member of the American Chemical Society.

Since his graduation, Mr. Braitberg worked as a development chemist on paints and lacquers for about six years with a large Chicago manufacturer and was interested in the ownership of a finish manufacturing firm for several years.

In his work for Allied, Mr. Braitberg will specialize in serving those firms that have had difficulty in solving their technical problems. He will also operate to some extent as a "trouble shooter" on applications as well as manufacturing problems.

"Picture Wood" Not Mahogany

The Mahogany Association, Inc., 75 Wacker Drive, Chicago 1, has received a number of inquiries about decalcomania or other reproductions of mahogany surfaces. Specifically the question is this: Does a cabinet qualify as genuine mahogany if "all exposed structural parts and plywood faces" are of mahogany, but over top or fronts highly figured "picture wood" is added.

The answer is no, in spite of the arguments in favor of such usage. Proponents of this practice contend that the cabinet complies with the rules for naming wood furniture, as laid down by the Federal Trade Commission—all exterior wood surfaces are mahogany and the "picture wood" is only a finish.

It is true that the rules established in 1925 do not specifically cover this practice, as it was not considered at the time the rules were made. However, it is obvious that such a product is capable of deception. The "picture wood" surface is a photographic reproduction of a beautiful mahogany crotch or swirl. The average person would accept the picture as the real thing without question especially if it were labeled "all mahogany."

The Mahogany Association will not issue its official labels or tags for use on cabinets on which "picture wood" is applied. It would also consider it a violation of the penalty contract under which labels are issued if the labels were applied to cabinets of this character.

Air Dries for Handling in 15 Minutes!

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FASTUFF

AIR DRY SYNTHETIC ENAMEL

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HERE'S THE ANSWER TO YOUR FLOOR SPACE PROBLEMS:

VELVA-TON FASTUFF, the synthetic that dries with the speed of lacquer. Not just faster, but 40% faster drying . . . for handling in 15 minutes, for packing in 2 hours, with a smoother finish that's tough and flexible. Why not prove it for yourself?

At Your Service: all the facilities of United's laboratories. Let us find the answer to your finishing problems with a custom-compounded formula and a generous working sample.

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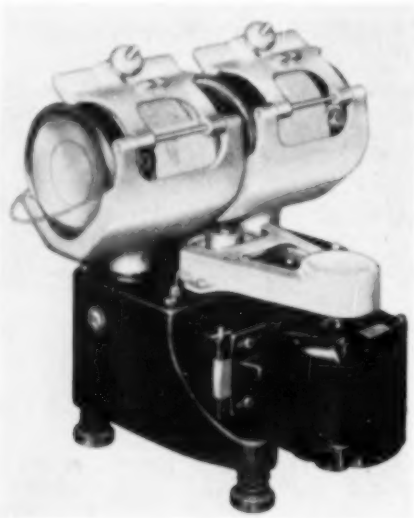
United LACQUER MFG. CORP.

LINDEN 6, N. J. EVERETT 52, MASS.

Harbil Paint Mixers Are Thorough, Rapid, Silent

The new Harbil paint mixers are available in two models. Model HB-8 weighs 270-lbs., is powered by a heavy-duty 110-volt, 60-cycle A.C. motor, and will shake 5-gallon, 2-gallon or 1½-gallon cans. It will also shake one 4-gallon carton. It has a silent chain drive, insuring a minimum of vibration, and an electric timer which can be set to shut off the machine automatically.

A smaller Model HB-7 weighs 125-lbs., is also powered by a heavy-duty 110-volt, 60-cycle motor. It will shake various size containers, from 1-gallon to ¼-pint, including two different size cans at one time. It is perfectly balanced on rubber cushioned spring legs, needs no bolting, and can be supplied with an electric timer. It is silent and vibrationless. Both models are approved by the Underwriters Laboratory. They are products of Harbil Mfg. Co., 325 W. Ohio St., Chicago 10, Ill.



The larger of the Harbil paint mixers.

All-Purpose Aluminum Cleaner

Diversey No. 36, a product of Diversey Corporation, 53 W. Jackson Blvd., Chicago 4, Ill., is a cleaner for removing forming oils, drawing lubricants, quenching oils, identification inks, polishing and buffing compounds from aluminum without etching or discoloring the metal.

In Diversey No. 36, the wetting and emulsifying powers have been developed to a high degree. In addition, free rinsability and the use of sequestering agents prevents "white film" formation.

A new 4-page folder gives complete information and three case histories showing the excellent performance of this cleaner.

Multi-Purpose Lacquer Developed by United Lacquers

A new multi-purpose lacquer, Base C 5015, which may be used to effectively finish all types of wood and metal products, has been developed by the United Lacquer Mfg. Corp. of Linden, N.J.

According to the manufacturer this new lacquer meets high performance

THESE NEW

JOHNSON *Sand-Air*

AIR-DRIVEN, RECIPROCATING-TYPE SANDING MACHINES

CUT FINISHING COSTS

IMPROVE OPERATOR EARNINGS

through:

FINISH CONTROL
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standards on wood, cold-rolled steel, silver and other metals, and as a result eliminates the need for manufacturers to stock different lacquers for use on different materials. Its versatility will make Base C 5015 particularly valuable to the lamp, toy, silver, jewelry and other industries using in their products several materials with different finish requirements.

This new lacquer gives excellent gloss, hardness, filling, film, and repellence to abuse, on metals and on wood. Of particular interest to furniture manufacturers is the fact that Base C 5015 becomes highly resistant to alcohol on aging. It may be applied by spraying or dipping, and is available in clear or colors, in either a full gloss, semi-gloss or flat finish. A special thinner, base TO 939, has been formulated to reduce this lacquer and provide unusually fine flow.

When used on wood, a sealer coat should be used first, and then two coats of lacquer should be applied. On metal, one coat of lacquer suffices.

Head Cutter for Steel Drums

A Head Cutter that cuts the head of any size drum, clean, in approximately one minute, has been introduced by Michael A. Schinker Mfg. Co., 6514 S. Western Ave., Chicago 36, Ill.

It is manually operated; will work equally well on empty or filled drums, from 10 to 55-gallon sizes and 20 to 16-gauge stock. It sets on the top of the drum. Turning of the crank causes it to complete the circle of the drum. The head will drop into the drum while the cutter remains resting on the open drum. The cut leaves no ragged edges and the metal is flanged slightly inward.

The device can be used on drums containing dangerous vapors. Dangerous torch cutting, saw-toothed edges, hammer and chisel noise of cutting heads are eliminated.

Portable; weight, 36-lbs.; safe.

It is constructed to withstand hard use. Strong, sturdy, yet light in weight. It has been thoroughly field tested. It is inexpensive to maintain. The cutter blade will cut about 1000 heads before dulling, and can be resharpened. The head cutter also doubles for sealing leaky chimes; cutter wheel is replaced with a roller wheel.

Removable Protective Coating

A removable protective vinyl coating, designed to prevent corrosion, scratching or abrasion of metals during production, assembly, shipping or storage, has been introduced by Specialty Coatings Laboratory, 1721 North Water St., Milwaukee 2, Wisc.

The coating is custom formulated to meet specific end uses such as masking or stop-off lacquers and protective films for polished metals. For the latter application a corrosion inhibitive composition has been developed to retard underfilm corrosion.

The coating is applicable by spray, brush, or dip methods and is available in a variety of colors, both trans-

WILLETT
Golden Grain
MAPLE

Filtered Air for finer finishes

FINE FURNITURE of solid maple and cherry is a tradition with Consider H. Willett, Inc., Louisville, Ky. Every production detail must measure up to the highest standards—and that includes filtered air for spray booths.

Pictured here is a pressurized spray room where the final varnish coat is applied. Outside air is first drawn through AAF Type MW4 viscous type filters. It then passes through the AAF Throway* filters, shown at upper right of illustration, which not only serve as after-cleaners but distribute the air evenly throughout the entire working area.

Clean air can both help you save money and improve product quality. AAF's complete line of filters offers a solution for every air cleaning problem. For complete information, call your local AAF representative or write direct to

AMERICAN AIR FILTER COMPANY, INC.
210 Central Avenue, Louisville 8, Ky.
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AAF

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AND ELECTRONIC PRECIPITATORS

**Replaceable type air filters.*

parent and opaque. A sprayed coating has a coverage of 250-sq. ft. per gallon per mil thickness. It can be air dried or force dried to provide a high degree of protection against weather, corrosive elements, aging, and abrasion. The coating can be peeled off whenever desired, leaving a clean, dry surface, or it can be obtained in an adherent type for permanent service.

L. K. R. Formula

L.K.R. Chemical Products Corp., 3113 Park Ave., Detroit 1, Mich., states that its L.K.R. formula is a chemical for preventing or stopping rust on iron and steel surfaces. It also prevents or stops wood rot, decay and fungus growth in other materials. It is a very penetrating material; it serves as a protection against salt, brine and most acid and alkali solutions.

New Burning-in Knife

A newly designed burning-in knife for use in making burn-in repairs on finished surfaces with stick shellac or stick lacquer has been developed by Wilkinson Equipment & Supply Co., 6958 S. Wentworth, Chicago 21, Ill., in cooperation with several burn-in and

Its perfect balance makes it easy to use.

patching experts. Considerable research work was done to get just the right steel for these knife blades. The blade is ground and then honed so that the heat can be concentrated where it is most effective for doing a rapid and skillful burn-in job.

The steel blades are ⅛-in. thick and are available in widths of ¾-in. and ½-in. Six knives are in a set—the

Instructor and group of students at spray booth in DeVilbiss Co.'s spray-painting school.

boost profits 2 ways

CUT FINISHING TIME

The New
Mity-Midget
$79.50

PRODUCE A BETTER FINISH

Use NATIONAL SANDER Model 400

The new Mity-Midget Model 400 National Sander cuts sanding time as much as 75%. Twenty-five square inches of abrasive area moving in a 3/16" orbital stroke makes from 5000 to 6000 revolutions per minute. In addition to speed, the Model 400 gives a better, more even finish. Paper is backed by a sanding pad and a metal backing plate to assure even pressure over the entire cutting area. Because it is made of strong, light-weight alloys, this efficient machine weighs only 4 lbs. See it at your distributor, or write for details.

Write for NATIONAL'S New Sanding Catalog

NATIONAL AIR SANDER, INC.
2818 AUBURN ST., ROCKFORD, ILLINOIS

square edge (like illustration), a right hand bevel and a left hand bevel; each of these three in both ¾-in. and ½-in. widths. Knives in this set will take care of all requirements that may come up in burning-in patches in corners, on flat and curved surfaces and on intricate shaped profiles.

The long tapered handle is made of wood and wound with silk fish line, and then finished, as shown in the picture. The knife is perfectly balanced like an artist's brush, so it is easily handled and doesn't tire the user.

Heat can be applied to the blade by an alcohol lamp or other means of heating, including the use of an electric heater.

A patent has been applied for the design, construction and general make-up of this burn-in knife.

Colored Decals Quickly Identify Fire Extinguishers

To help identify and locate the proper fire extinguisher in a hurry, the Meyercord Co., Chicago decalcomania manufacturer, reports the development of *three* unusual new decal sets for positive selection of *three* types of extinguishers for fires of: 1) Wood, paper, rubbish; 2) Electric, gas, chemical; and 3) of any origin except electrical.

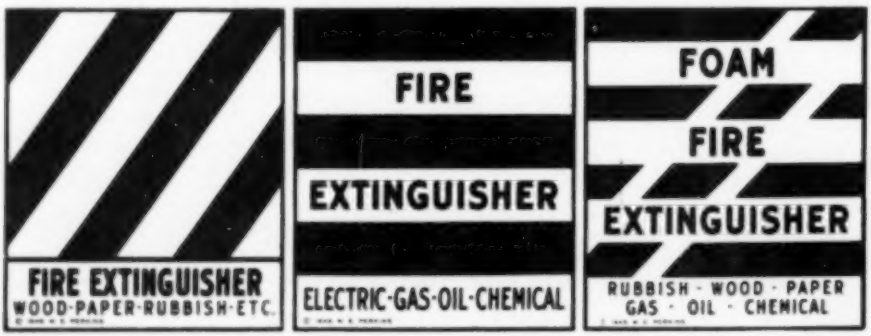
A large decal (8x9-in.) is supplied for application to the wall above the fire extinguisher, and a smaller one (1¾x2-in.) for the extinguisher itself. The new decals identify in three ways: by color code, by design, and by printed instructions naming proper use.

The decal selection sign for fires of wood, paper, or rubbish origin has black and yellow diagonal bars. For electric, chemical or gas fires, the identifying design has red and white horizontal bars.

The third decal was developed to identify foam-type fire extinguishers, which are suitable for any but electrical fires. This pattern employs red and white horizontal bars cut diagonally by a combination yellow and black stripe.

Reports from fire extinguisher manufacturers, insurance companies, municipalities and industrial establishments indicate a reduced time lapse in selecting the right fire extinguisher when the decals are used, especially when employees have color deficiences, or are unable to read.

Further details regarding these copyrighted designs may be obtained by writing the Meyercord Co., 5323 W. Lake St., Chicago 44, Ill.



Large decals (8x9-in.) for the wall, and small decals (1¾x2-in.) for the extinguisher itself.

Dress your product in its Sunday best

RANDOLPH

LACQUER FINISHES

Free Flow Lacquer Thinner NB
Gloss Wood Lacquer #8457, Free Flow
Satin Finish Free Flow Lacquer X-6888

When you see a surface with flawless smoothness and luster you can be sure a Randolph Free Flow Lacquer finish has been applied. No blushing—no irregularities on the surface—no orange peel effects. Try these Randolph finishes. Your product will be dressed to go places with a finish that's attractive, long-lasting, and tough.

Randolph's technical staff of experts specializes in solving finishing problems. If you have any such problems, consult our technicians—without obligation, of course.

RANDOLPH PRODUCTS CO.

Carlstadt • New Jersey

DOPES LACQUERS ENAMELS THINNERS

New Chemical Resistant Fabric

Gra-Lite fabric, developed by the Standard Safety Equipment Co., 232 W. Ontario St., Chicago 10, Ill., now combines the best features of protection, comfort and durability demanded of a safety material. This new fabric provides greater resistance to a wider range of chemical hazards, including—with special preparation of the compound—resistance to anhydrous hydrogen fluoride. With Gra-Lite compound it is possible to completely seal over garment seams and prevent chemical seepage. For maximum worker comfort, Gra-Lite is more than 40% lighter than the ordinary impervious fabric and extremely flexible—even under freezing temperatures this fabric retains its flexibility. New design features in garment tailoring and the inherent texture of Gra-Lite prevent binding and clinging.

Wear safety clothing when working with acids or other strong chemicals.

"Nacromer", Undercoat or Sub. for Pearl Essence

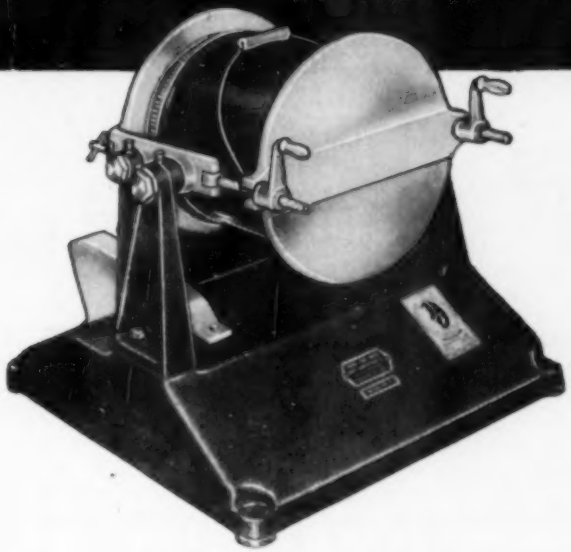
Nacromer was developed as an economical substitute for pearl essence. While it is not as brilliant and has not as great a sheen as pearl essence, it is extensively used as an undercoat in the manufacture of simulated pearls. Its use enables the manufacturer to use fewer coats of the more expensive essence. Two coats of lacquer containing 5¼-oz. per gallon of Nacromer W.P. are applied to the bead, and only two coats of pearl essence are then needed over the Nacromer to produce a good pearl.

Nacromer can be used in many other ways as a partial or complete substitute for pearl essence. An undercoat of Nacromer, either sprayed or dipped, can be used on buttons to save the more expensive essence for the top coat. The use of Nacromer as a top coat on casket hardware gives good gunmetal, bronze and other metallic finishes. These as well as pearl decorative finishes achieved with Nacromer are being used in the statuary, jewelry and sporting goods industries. Mixed with other pigments, Nacromer will create new shades in the color industry. Nacromer is generally used in the exact manner and in the same colors as natural pearl essence. It is a product of The Mearl Corp., 153 Waverly Pl., New York 14, N.Y.

XLN Wire Enamel

Longer life and greater efficiency for electrical equipment are forecast as a result of the Standard Varnish Works' development of "XLN", a new magnet wire enamel. According to the company's announcement, the new enamel shows superiority to those in current use in three important characteristics; namely, increased heat resistance, economical application without costly dies, and superior resistance

New! The remarkably efficient HARBIL paint mixer!



Model HB-8

Shakes 5, 2, 1½ gallon cans or a 4 gallon carton. Silent chain drive, built-in electric timer. Heavy duty motor. Fast, smooth, and fully guaranteed. Thousands of enthusiastic users say it is revolutionizing their production!

$340.00

F.O.B. Chicago

Increase your production and save operating costs! This Harbil paint shaker mixes paint automatically, more thoroughly and faster than by hand! Saves time, labor and costs. Nothing like it on the market! Self timer shuts machine off at desired mixing time. Keeps new paint fresh, reconditions old.

Simple, Fast Color-Mixing

Removable, self-sealing lid permits color mixing and testing without taking paint can from machine. Insures perfect color matching, eliminates blobs of pigment. Perfect mix for perfect finish!

Harbil Mfg. Co., Dpt. 3
325 W. Ohio St., Chicago 10

Please ship me the Harbil HB-8 or send me Free Booklet.

Firm .....

Address .....

City ..... Zone ..... State .....

to abrasion in the actual magnet winding.

"While the last-named properties, economical application and abrasion resistance, are of value chiefly to the manufacturers of wire and electrical equipment, the heat resistance of XLN will have a more direct effect upon consumer products, such as radios, television sets, appliances, automotive electrical systems, etc."

Identify Factory Piping with Colored, Shaped Metal Tags

Almost everyone will agree that it is desirable to have the pipe lines in factories correctly identified so one can tell at a glance whether a pipe contains gas, compressed air, steam, hot water, cold water, water for the sprinkler system, chemicals, etc.

The National Safety Council's recommended color code for identifying the contents of pipe lines is as follows: Red for fire protection materials and equipment; yellow, dangerous materials; green, safe materials; blue, protective materials; purple, extra valuable materials.

Some concerns go so far as to have their pipe lines completely painted with identifying colors. Others have only occasional short lengths of piping painted in an identifying color.

An excellent system that is inexpensive, non-troublesome and which is readily adaptable to anything from the smallest to the largest plants has been developed by Jas. H. Matthews & Co., 3942 Forbes St., Pittsburgh 13, Pa. This firm has developed small metal tags (26 different shapes) which are embossed or stamped with the name of the contents in a pipe line. These tags are made from natural metals and they can be left in their natural color or enameled in any bright color desired.

For Water Wash Spray Booths

A new material, specifically designed for keeping walls and working surfaces of water washed paint spray booths clean and free of overspray, is announced by Oakite Products, Inc., 132F Thames St., New York 6, N.Y. This new material, known as Oakite Composition No. 45, is said to permit longer operation of paint spray booths between regularly scheduled maintenance cleaning. It prevents the adherence of overspray to aprons, baffles, lines and flood sheets of water washed paint spray booths. It may also be used effectively for stripping organic finishes which coat paint racks, hooks and similar spray booth equipment.

"Sight Saver" Dispensers

Dow Corning Corp., Midland, Mich., announces the availability of Sight Saver tissue dispensers for plant and office use. An attractive new metal wall dispenser that holds a normal month's supply of 3x7-in. Sight Saver tissues is now available for industrial

Keeps spectacles clean and clear.

AT REDUCED COST

by using KETONE Lacquer Solvents

With Ketones you can offer more durable lacquers . . . lacquers that meet the highest specifications for cold check. That's because Ketones permit the use of more high viscosity grade nitrocellulose at practical spraying viscosities.

Be sure YOUR solvents also offer these advantages:

1. **High solids content**
2. **High diluent tolerance**
3. **Low viscosity formulations**
4. **Low specific gravity**

Have you heard the *full story* on the cost-cutting advantages of Ketone Solvents? Call your Shell Chemical Representative and have him point out the basic factors that will enable you to profit by the competitive advantage of Ketone formulations.

SHELL CHEMICAL CORPORATION

Eastern Division: 500 Fifth Avenue, New York 18 **Western Division: 100 Bush Street, San Francisco 6**

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and commercial use. These Sight Saver tissues contribute to safety and improve morale by providing employees with a better and easier way to keep their eyeglasses and goggles clean.

Sight Saver tissues are impregnated with a special Dow Corning Silicone that gives added clarity and luster to glass. This silicone also forms an invisible coating that protects the surface and prevents the adherence of most organic materials. No fluid is required. The only servicing involved is the simple insertion of a refill pack of tissues.

23-Karat Gold Decals

"Golden Touch" is genuine 23-karat gold applied to a special decalcomania transfer sheet. This new product was developed after years of experiment by M. Swift & Sons, Inc., Hartford 1, Conn., manufacturers of gold leaf since 1887.

You simply cut a sheet of "Golden Touch" to desired size or pattern, soak in water 30 seconds, slide off genuine gold film, and apply directly to wood, metal, glass, leather, or most other smooth surfaces. It opens new decorative possibilities in gilding a variety of products.

Decorating black lacquered chest with "Golden Touch."

Clear Lacquer for Silver

The Egyptian Lacquer Mfg. Co., South Kearny, N.J., and Lafayette, Ind., has introduced a new silver lacquer "26-CN" for compacts, cigarette cases, costume jewelry, novelties, and plated ware. It can be sprayed or dipped.

Characteristics are: water white finish, crystal clear film, remarkably tough, exceptional sulphide-tarnish resistance, preserves the natural color of the silver.

Cleans Small Metal Parts

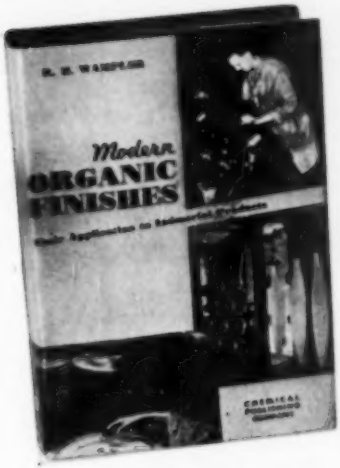
A new time and labor saver for cleaning all kinds of mechanical parts is the Wilkinson Degreaser, just placed on the market by Wilkinson Mfg. Co., Omaha Nat'l Bank Bldg., Omaha 2, Nebraska.

Approximately 70 gallons of chemical are required but because the design of the unit provides for recirculation of the fluid, a single filling lasts for months.

Dirt and grease removed from parts in cleaning settle to the bottom of the tanks and may be flushed out by pumping the detergent into a receptacle and washing the tanks with water. Sufficient detergent is retained in the sludge settlings to permit easy flushing through the 2-inch drain plug in the bottom of the tank. After cleaning the detergent is pumped back into the unit and used over and over again.

Because the chemical used performs more efficiently when heated, the design of the Wilkinson Degreaser

A "MUST" For All Finishers!



MODERN ORGANIC FINISHES

"Their application to Industrial Products"

This book contains 452 pages of the latest information on finishing. It describes modern finishing materials and equipment for their application, drying, conveying, etc., so that the reader may have an overall picture of modern industrial applications. Throughout, the main emphasis is on proper selection and use of materials to get the best possible finish at minimum cost.

It's Complete — Note the Contents

MATERIALS: Oleoresinous and Alkyd Varnishes and Enamels; Cellulose Lacquers; Spirit Varnishes, High Integrity and Specialty Finishes; Stains, Wood and Metal Fillers, and Miscellaneous Finishing Materials.

MODERN APPLICATION METHODS:

Spray Painting; Dipping and Flocoating; Roller and Knife Coating; Tumble and Centrifugal Finishing; Special Processes.

DRYING METHODS:

The Drying Process—Air Drying; Force Drying; Baking by Convection and Radiant Heat; High-Frequency Baking.

PRODUCT HANDLING IN THE FINISHING DEPARTMENT:

Conveying Methods.

FINISHING PROCESSES:

Wooden Furniture and Cabinet Finishing; Prefinishing Wood, Plywood and Hardboard Structural Materials; Special Industrial Wood Finishing Problems; Finishing Paper, Cardboard and Fabrics, Finishing Plastics and Resin-Impregnated Wood; Cleaning and Surface-Treating Metals; Finishing Automotive and Railway Equipment; Finishing Sheet Steel Products; Finishing Iron Castings; Finishing Aircraft; Rubbing and Polishing Organic Finishes.

SOME GENERAL CONSIDERATIONS:

Good Practice in the Finishing Department; Testing and Evaluating Finishes.

The price is $8.50 and to eliminate bookkeeping we ask that cash accompany order. Sold on a money-back guarantee. Money refunded promptly and without any questions if you are not satisfied.

INDUSTRIAL FINISHING Magazine

1142 North Meridian Street **Indianapolis 4, Ind.**

provides for installation of an immersion-type heating unit with thermostatic control. The heater is supplied by the manufacturer as an optional extra and may easily be installed at any time.

Strong Tape Used for Packaging

What is claimed to be "the world's strongest tape with a pressure-sensitive adhesive" is made with glass—"Scotch" brand filament tape No. 890, a product of Minnesota Mining & Mfg. Co., St. Paul, Minn.

The new tape has an acetate film backing, and has glass filaments instead of rayon—thousands of parallel filaments that run lengthwise with the tape. The filaments are permanently imbedded in a resilient, shockproof rubber adhesive on the tape, reinforcing the tape "like steel rods reinforce concrete".

Tape replaces steel strapping for many jobs.

The new tape provides 500-lbs. of tensile strength per inch of width. Its shock resistance and tear resistance are remarkable. It is made in 72-yard lengths, and in standard widths of ½, ¾ and 1-in., with other widths made on special order.

The 3M company expects to begin deliveries the second quarter of 1950, "possibly sooner". Sample rolls are available immediately.

Measures Viscosity

The Brookfield Synchro-lectric viscometer makes accurate viscosity determinations in 30 seconds—as simply, quickly and easily as taking a temperature reading.

Just a flick of a switch, then read the Brookfield viscometer dial, and you have your viscosity results in centipoises. The instrument is portable and plugs in any outlet; it can be used in laboratory or plant. It is available in a variety of models suitable for work with a wide range of materials.

The manufacturer is Brookfield Engineering Laboratories, Inc., Porter St., Stoughton, Mass.

Protects Metal Surfaces Against Rust

A new synthetic liquid plastic coating, announced by Krome-Kote Co., Hyde Park Bank Bldg., Chicago 15, Ill., protects metal surfaces against rust, corrosion, pitting and tarnish.

Called Krome-Kote, this clear liquid plastic protects and beautifies metal and chromium of automobile parts. It is easy to apply. It may be sprayed, brushed or wiped on, and once applied it will not oxidize, break down or powder off. It is impervious to the deteriorating effects of salt water, alkali, salt compounds which are used for melting snow and ice off roads; and alcohol and most chemicals.

"Made to Order" for LARGE PRODUCTION OPERATIONS

In this big LANLY OVEN installation the painted parts move continuously on an overhead conveyor through the various equipment used in processing.

Two LANLY gas heated, three-pass ovens dry the prime and finish coats on parts after they leave the spray booths.

Write us for complete information and our NEW CATALOG.

THE LANLY COMPANY, 760 Prospect Ave., CLEVELAND, OHIO

I. C. D. FORMULA NINE

NON-INFLAMMABLE « *wax free* REMOVER »

for paint, varnish, lacquer, baked enamel, adhesives

EASY TO APPLY—NO AFTER CLEANING

I. C. D. FORMULA 9 is the standard of safety and quality . . can be sprayed or brushed . . doesn't raise grain nor discolor . . quickly removes all kinds of finishes and coatings from any surface or material . . costs less to use . . saves time, labor and material.

BRUSH CLEANER I. C. D. — non-inflammable brush cleaner works fast . . does not injure nor loosen the bristles. Easy to use . . leaves the bristles clean as a whistle. Order a gallon can and convince yourself.

ORDER TRIAL GALLON AT DRUM PRICE

INDUSTRIAL CHEMICAL DEVELOPMENT CORP.

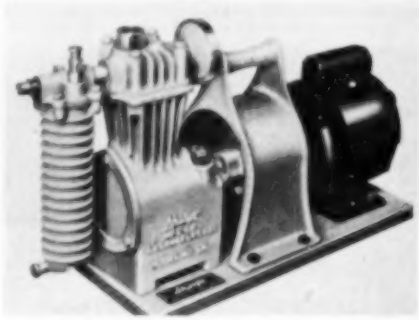
515 FLUSHING AVE. BROOKLYN 5, N. Y.

Durable Gloss Paints for Masonite Hard Board

By using newly developed formulas and a special method for the dispersion of paint pigments, The Monroe Sander Corp., 10-18 46th Ave., of Long Island City, N.Y., is now able to produce new types of synthetic enamels that give maximum gloss and exceptional durability. These enamels, available in all colors, can be air dried or baked and are manufactured primarily for Masonite and metal products.

New "Sharpe 5N" Compressor

Features of the "Sharpe 5N" air compressor announced by Sharpe Mfg. Co., 1224 Wall St., Los Angeles 15, Calif., are: ½-hp. General Electric motor; 5.31-cu. ft. displacement of air;



Convenient portable compressor; ½-hp. motor.

50-lbs. plus working pressure; light weight and auto-type piston with three perfectly fitted rings finely machined to close tolerance to give high efficiency; counterbalanced crankshaft mounted in double suspension of ball bearings; well placed handle for balance in carrying and protection from moving parts; large intake filter and air conditioner.

New Extension Spray Guns Reach Surfaces 12-ft. Away

A new type of extension spray gun capable of reaching to the second-story level, has been developed by the Eclipse Air Brush Co., Newark, N.J. These extension spray guns are available in lengths at 2-ft. intervals from 4-ft. to 12-ft.

Six-foot extension weighs only 4-lbs.

In the same series of extension guns is one equipped with a 360° nozzle which is designed for remote-control spraying inside pipes and conduits. Variations in nozzle and extension arm design, the company adds, make possible spray coating around corners and otherwise inaccessible locations.

Be Fresh . . . Stay Fresh!

on

PAINT SPRAY JOBS

wear a DUPOR Chemical Cartridge Respirator No. 10

Ideal for paint, lacquer, enamel vapors, fumes, gases, etc. Face mask gives air-tight fit, controlled breathing, panorama vision with no blind spots. Cartridges are of colored plastic for easy identification! When ordering, specify the WHITE for Code A; BLACK, Code B; YELLOW, Code AB.

Sample sent
$4.50 pp

H. S. COVER
South Bend, Ind.

COVER'S GAS-TIGHT FOG-PROOF GOGGLES $1.65

BOOKS On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) New	$8.50
"CHEMICAL FORMULARY" (Vol. VIII)	7.00
"FINISHING METAL PRODUCTS"—2nd ed. (352 pages)	4.00
"PRACTICAL FURNITURE FINISHING" (112 pages)	1.25
"FURNITURE FINISHING" (543 pages)	4.00
"SPRAY PAINTING"—Industrial and Commercial (169 pages)	2.00
"THE MIXING OF COLORS AND PAINTS" (292 Pages)	2.50
"WOOD FINISHING" (361 pages)	2.50
"NATIONAL PAINT DICTIONARY" (704 pages)	7.50
"MODERN POLISHES AND SPECIALTIES" (313 Pages)	7.50
"PRACTICAL COLOR SIMPLIFIED" (128 Pages)	5.00
"GRAINING"—Ancient and Modern (224 Pages)	4.00
"THE SILK SCREEN PRINTING PROCESS" (225 pages)	4.00
"INDUSTRIAL APPLICATIONS OF INFRA-RED" (200 pages)	3.50

Cash Must Accompany Order—Send for Descriptive Circular

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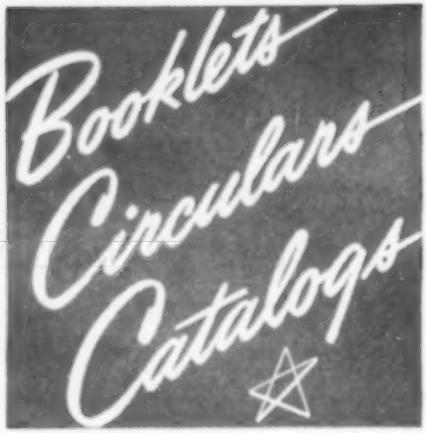


For Sealing Metal Castings

Complete illustrated technical data about materials, methods and equipment for use in sealing porous metal castings, are included in a folder which can be obtained free from Western Sealant, Inc., 9044 Culver Blvd., Culver City, Calif.

Tapes for Many Purposes

A 12-page booklet published by Industrial Tape Corp., New Brunswick, N.J., illustrates and describes several practical uses for industrial tape, which includes masking tape for use on many kinds of product paint jobs. Several different kinds of tape are listed on the inside back cover of the booklet.

Bulletin on New Copper Abrasive

"Copper Shot for Blast Cleaning and Finishing Non-Ferrous Metal Parts" is the name of a new bulletin now available from American Wheelabrator and Equipment Corp., Mishawaka, Ind. The several advantages of using copper shot are given.

Data on Safety Equipment

The 1950 issue of "Everything in Safety," a catalogue of personal protective equipment and industrial safety devices, has been released by the General Scientific Equipment Co., 2700 W. Huntingdon St., Philadelphia 32, Pa.

This new catalogue covers, respiratory devices, eye protection, hats, gloves, carboy pumps, drum pumps and miscellaneous industrial safety equipment for use in industries, mines, utilities, and farms. It is 46 pages, fully illustrated, and includes price list. Copy sent free.

Tank Immersion Heater

A new portable tank immersion heater for heating water solutions, solvent cleaners and other similar compounds is announced by the Edwin L. Wiegand Co., manufacturers of Chromalox electric heating units, 7500 Thomas Boulevard, Pittsburgh 8, Pa.

Bulletin on Buffalo A.F. Fans for Spray Booths

Bulletin 3533-C, announced by Buffalo Forge Co., 532 Broadway, Buffalo, N.Y., contains information and illustrations relating to the company's new line of Vaneaxial and Tubeaxial exhaust fans (non-sparking wheels) for spray booths.

Handling Materials Equipment

A materials handling manual that offers 355 ways to cut inventories has been prepared by Aerol Co., Inc., leading West Coast manufacturers of materials handling equipment.

A postcard or letter to Aerol Co., Inc., 2820 Ontario St., Burbank, California, is all that is necessary to obtain a copy of this catalogue.

Tack Rags in Cartons

A new method of packing tack rags is announced by Ideal Chemical Co., 1689 Lee Road, Cleveland 18, Ohio. Now Ideal Tack Rags are packed one dozen each in an attractive 2-color carton which can easily be adapted for display purposes.

The carton preserves and protects the tack rags and insures their freshness and cleanliness. They are easier to store and easier to inventory. For large users they may be obtained in bulk packaging.

Brushing Analysis Plan Offered by Osborn Mfg. Co.

Osborn Brushing Analysis, which was discontinued during the war, has been re-established by The Osborn Mfg. Co., largest manufacturer of power-driven brushes for industry, Cleveland, Ohio.

Osborn specialists will visit plants on request and provide a written confidential report covering every operation using brushes, with recommendations on how savings might be made, operations where brushes are not used but where brushing would increase production or improve the product, and operations where brushes are used where another method would prove more advantageous.

One of the Osborn Brushing Analysis reports showed a builder of road equip-

Tack-Off Dust, Grit and Lint with a "DUST-ALL" Tack Rag before finishing

Specks of dust, grit and lint accumulating on surfaces to be finished, cause blisters and blemishes when painted over. For only a few pennies per job, your finishing department provided with "Dust-All" Tack Rags to wipe off, collect and hold this objectionable matter, can be assured of fine finish jobs.

Ask for further information on "Dust-All" Tack Rags for industrial use and for a sample.

Be sure to get the Tack Rag that comes in the Red Checkered Bag.

HARDING *Manufacturing Co.*

10620 Gratiot Ave., Detroit 13, Mich.

QUALASOLE

AMERICA'S FINEST PADDING LACQUER

Creates new life in wood

- **It is the Modern French polish**
- **Produces a beautiful, rich finish**
- **Can be applied easily with a pad**
- **Quick drying, durable, permanent**
- **Meets present day production demands**
- **No other finish compares with QUALASOLE**

Order a Trial Gallon Can Today!

QUALATONE PRODUCTS INCORPORATED

21 GAY STREET, NEW YORK 14, N. Y.

ment how he could speed up his weld cleaning operation 40%; another resulted in a shipbuilding company cutting its metal cleaning costs in half; a third enabled a wire company to remove enamel from armature wires ten times faster.

During the many years of developing and making a complete line of industrial brushes, Osborn has studied all types of cleaning, finishing and polishing problems. It is this experience that goes into an Osborn Brushing Analysis.

"Ovens for Industry" Bulletin

More than 80 illustrations are included in the new Lanly Oven catalog No. 490, which shows products of The Lanly Co., 750 Prospect Ave., Cleveland, Ohio. Ovens and driers for force drying, curing or baking paint and enamel coatings on metal products are included. Drawings show details of oven insulation, construction and assembly. The catalog contains 16 pages, 8½x11-in., and is printed in green, red and yellow.

Murco Tumbling Barrels

Motor-driven, octagon-shaped, horizontally-mounted tumbling barrels are illustrated and described in a new 2-color circular which will be sent free by D. J. Murray Mfg. Co., Wausau, Wisconsin. Each steel barrel is vertically partitioned into two equal compartments, one or both of which can be lined with hard maple or rubber, if this is desirable. These barrels can be used for tumble finishing small parts made of metal, wood or plastic.

"Duridizing" Metal Surfaces Before Painting

A new 4-page bulletin, released by American Chemical Paint Co., Ambler, Penna., explains and illustrates how "Duridine" cleans metals and forms a coating of iron phosphate on iron and steel surfaces to produce an excellent and lasting bond for paint, enamel or other finishing materials.

Duridizing is most effectively applied in a power spray washer, since its chemical cleaning and coating action is augmented by the forceful impingement of the solution on the metal. However, it can also be used effectively in tanks in an immersion process with the same sequence of operations. Duridizing is readily adaptable to intermittent production, full scale production, and production with mixed metals (steel, zinc, aluminum).

"Duridine" with its uniform and smooth crystalline texture, enhances the luster inherent in modern enamels, especially white enamels. Its smoothness promotes high surface gloss and assures enduring eye appeal.

Tank Heating and Cooling

Tank Heating and Cooling is described and illustrated in a new 6-page bulletin published by the Kold-Hold Mfg. Co. of Lansing, Michigan. A direct comparison is made between the Platecoil and pipe coil methods of heat exchange. The bulletin shows how Platecoil takes only half the tank space, yet heats faster than pipe coil. The ten merits of Platecoil are described in relation to savings in time, money and manpower for the user.

Fast-Bake White Synthetic

A technical bulletin describing the development of a speed-bake white synthetic enamel for reflecting surfaces of lighting fixtures has been prepared by Monsanto Chemical Co., Dept. I.F. M1, Boston 49, Mass.

Advantages derived from the coating are outlined in the bulletin. They include improved durability, color retention, reflectivity and chemical resistance. A high quality finish is economically obtained by a single coat application and a short baking cycle, according to the bulletin.

Techniques of Plant Maintenance —1950

Publication of the text of the most comprehensive discussion of problems of plant maintenance ever undertaken is announced by Clapp & Poliak, Inc., the management of the Plant Maintenance Show which was held in Cleveland, O., in January. The two-volume text, "Techniques of Plant Maintenance—1950," are the proceedings of the first Plant Maintenance Conference held concurrently with the show.

Thirty outstanding experts in various fields of maintenance led the conference and about 8,000 executives concerned with plant maintenance attended. The two volumes comprise 278 pages, 8½x11, and include 47 pages of tables, diagrams, illustrations, graphs and charts. Questions submitted—554 of them—by the audience are answered in the second volume.

The books are available from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N.Y. Price for both is $2.00

Subjects covered include maintenance organization and principles; maintenance costs and budgeting; selection and upkeep of lighting equipment; upkeep of motors, controls and distribution equipment; use of electrical instruments in maintenance; upkeep of floors, walls and roofs; relationship of lighting and color to production; sanitation and housekeeping; lubrication; application of service equipment; protection of plant and worker, and the importance of maintenance to safety.

TIME OFF FOR SCRATCHING?

a scratching worker

IS NOT

an efficient worker

Tarbonis

is available in 1-lb. and 6-lb. jars.

Skin irritations are frequently the cause of slowdowns and absenteeism among plant workers. TARBONIS has a long record in hundreds of plants for overcoming and guarding against the recurrence of skin irritations.

COMMON SKIN IRRITANTS

- Cutting Oils
- Sodium Bichromates
- Metal Dust
- Lime
- Plastic Compounds
- Chrome Dyes
- Naphtha
- Urea and Phenol
- Detergents

THE TARBONIS COMPANY, Dept. IF
4300 EUCLID AVE., CLEVELAND 3, OHIO
PLEASE SEND ME A SAMPLE OF TARBONIS.

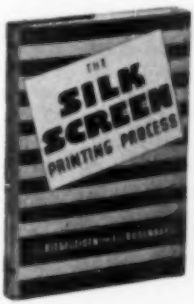
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____
BY_____ DEPT._____

"The Silk Screen Printing Process"

By J. I. Biegeleisen and E. J. Busenbark

THIS LATEST book on the subject covers everything that is worth while to have in book form about the silk screen printing process. It covers in detail all of the equipment, printing apparatus, tools, etc., and the paints and materials that become the finished product; tells how to select them for various purposes and how to handle them for best results.

Information is given about the reproduction of printing and art work by this process on various surfaces such as paper, cardboard, cloth, felt, wood, metal and composition materials. Also, the making of drawings and stencils, finishing work, estimating costs, shop management and recent developments.



Second Edition
225 Pages, 6x9
90 Illustrations
$4.00 POSTPAID
Remit with Order

INDUSTRIAL FINISHING,
1142 North Meridian Street, Indianapolis 4, Indiana

Industrial FINISHING Editorial

Creative Idea Sold an "Impossible" Prospect

The following account is the highlight of an address given last fall before the Grand Rapids Sales Executives Club by Joseph A. Hager, V. P. and Director of Sales for The Grand Rapids Varnish Corp.:

"Our product is not one that can be looked at and evaluated. It isn't that tangible. We sell many industries, among them the furniture industry. A favorite way of intriguing a furniture company's buyer is to develop a panel to illustrate a finish produced with our product. We say, 'Isn't this a beautiful mahogany color and treatment, and wouldn't that look good on your No. 200 suite?' The salesman may show half dozen finished panels.

"The thing that frequently happens when such a panel is shown to a buyer is to find that you are dealing with one small segment of the industry; all have different ideas and different problems. Some of them say, 'Yes, that's beautiful. But I think our No. 200 suite is all right . . .'

"Then you come to the group whose No. 200 suite doesn't look that good. 'But you have a beautifully selected wood there. If we bought veneers like that, we would have no trouble getting that result. We can't afford it. We are in such-and-such a price range, and we can't buy the grade of veneers that you have used in your panel.'

"The salesman I have in mind, seized that type of buyer for his effort in creative selling. Then he did a job of creative thinking for which I will long be indebted to him, because it provides the most dramatic visual evidence of a creative selling job that I could ask for.

(Here is unveiled a mahogany dresser one-half of which is hidden by a paper cover.)

"Here is a piece of furniture manufactured by a large producer in the South; what you see now is his furniture finished as he sold it in a volume of about $8,000,000 a year. This particular piece of furniture was bought in one of our local stores. I recommend that you take a close look at the finish on this dresser, so that you may be able to see and understand the job of creative selling that this salesman conceived and executed.

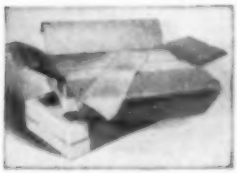
"Here was his prospect's production. (Pointing to the visible half of the dresser.) The buyer had previously told him, 'This panel you show me is beautiful, but we cannot afford to buy that kind of veneer'. So the salesman bought this piece of furniture and stripped the finish off one-half of it. Then he finished that half as he thought it should be finished and here (tearing off the paper covering) is the result.

"When you come to look at the finish on the two halves, I think you will agree that you would pay $50.00 more for the suite finished as the right-hand side is finished, than you would pay for the suite finished as the left-hand side is finished. As a matter of fact, you might well hesitate to buy the suite finished as it was finished for the asking price.

"This was the approach this salesman used to get interested attention; he got such interested attention that

NOW! Tack Cloth in Handy Rolls *or* Cut Bulk

Cut off any size piece and use as needed.



Already cut and folded, ready to use.

Now you can get Tack Cloth packed the way it's easiest for you to use—either in 150 yard rolls of 36" wide cloth or in handy cartons—100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will **stay SOFT and TACKY** until the very last bit is used up.

The Cut Bulk size is 18" x 36"—folded to 4½" x 18" for easy handling. **All of our Tack Cloth is Spontaneous Combustion-Proof, Lint-Free and Wax-Free.** It's clean and sanitary—there's no waste.

Write today for complete information, prices and samples.

Baughn Chemical Products Company

"The Tacky Wiper Specialists"

7027 N. RAVENSWOOD CHICAGO 26, ILL.

Also Individually Packed in Glassine Envelopes —144 to the Carton.

A WARRANTY OF SATISFACTION IN EVERY CARTON

FINISHES FOR THE PRODUCTS OF INDUSTRY

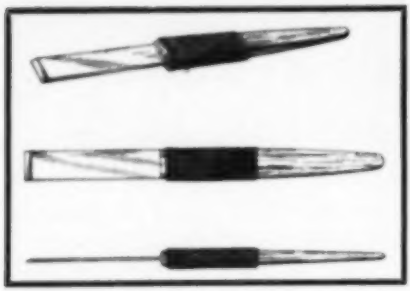
NEOPRENE COATINGS VINYL FINISHES

GATES ENGINEERING CO.

NEW CASTLE, DELAWARE

Pioneers in* NEOPRENE *and* VINYL *Products

Write for Literature



(Patent Applied For)

The first professional patching knife offered to the furniture trade. The knives are available in ¾" and ½" width with straight and 15° beveled edges. Choice of walnut or mahogany handles.

The Latest in...

BURNING-IN KNIVES

In and about Chicago, where they have been tried out for several months, these newly designed burning-in knives have proved definitely satisfactory. Developed with the cooperation of several expert burning-in men in this vicinity, the knives embody many new features which make them outstanding in performance and ease of handling.

Knives are made of just the right steel, especially selected through considerable research work and tested for the purpose; blades are ground and then honed for concentration of heat where needed.

Wood handles bound by silk fish line, hold blades in secure position. Knives are perfectly balanced like artist's brush, for easy handling.

Send your order TODAY — Prompt shipment assured.

Wilkinson Equip. & Supply Co., 6958 S. Wentworth, Chicago 21, Ill.

he waded right through the need for proving himself, for proving his proposition, for getting action to get the order signed, because he showed that manufacturer a way in which his furniture, selling in a middle-priced bracket, would be competitive in eye appeal with furniture in the next higher priced bracket. The result of this job of creative selling, was that the furniture manufacturer bought what the salesman offered; the appearance and the value of his line was improved and his sales volume remained high during the recession."

Finishing Engineer Writes the Editor

Today being a holiday, I am dedicating my efforts toward a long overdue obligation, catching up with some correspondence. I have never worked at anything which made such a demand on my time as this job. About half of my time is spent on the road trouble-shooting and demonstrating new products. The balance is spent in the lab, working the bugs out of new and old formulations.

In addition to having to sell my own organization some progressive ideas, I must act as a sort of liaison between the customers, the salesmen, the management, the lab and the factory. It requires some fancy maneuvering to get things done without hurting any feelings. Like many old organizations, this one became mired in old methods and traditions; veteran employees are stuck in a rut 20 years deep. This is probably the reason that so many of the old concerns, unable to compete with either the bright newcomers or the efficient impersonal corporations, have sold out in the last few years.

Lest this be mistaken for pessimism, let me correct that. While I sometimes get a bit discouraged, I rather

like the entire outfit from top to bottom. Furthermore, I think that they reciprocate. We are getting results, though slowly. We have a few products that are without a peer in the business. My task is to locate these and keep them selling, while we work out others that will do us equal credit.

Many of our products are excellent except for some minor fault, such as settling or gelling, which can easily be corrected once we find it. Our main drawback is sufficient laboratory and testing space. We have the equipment but not enough space in which to utilize it properly. All this adds up to enough to keep me going from morning till night, and then haunt my sleep.

Let's Help Reduce Loss by Fire

Even though fire losses tapered off slightly during 1949, an estimated $667,536,000 in irreplaceable property was destroyed by flames during the year. The total was about 6% below the all-time record for destruction set in 1948, when losses were estimated at $711,114,000.

The thousands of fires which broke out each day during 1949 burned up homes and jobs as well as needed foodstuffs and materials required to keep the nation's production moving along smoothly and profitably.

The slight dip in fire losses represented the first reduction since 1942. Estimated cost of losses for the past ten years totalled nearly five billion dollars worth.

The 1949 decline can be attributed in part to the slight drop in the general price level, but fire prevention authorities also credit effective local fire safety campaign with having helped too.

Individuals who have anything to do with cleaning, finishing or polish-

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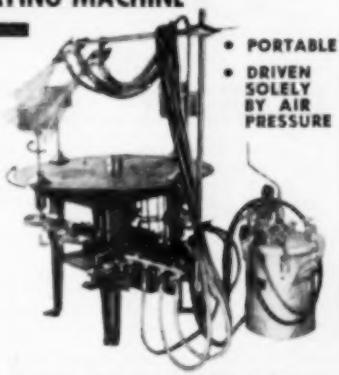
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IDEAL CHEMICAL COMPANY
1689 Lee Road Cleveland 18, Ohio

ing materials, solvents, supplies, equipment, or areas where such things are stored, transferred or handled, have a real responsibility in doing everything they can toward preventing, removing or safeguarding fire hazards—or if they personally can't or won't do anything about it they should promptly report it to someone who will immediately start action in the interest of safety.

Often many fire hazards are allowed to exist because of carelessness on the part of some people, indifference on the part of others, and ignorance or lassitude on the part of still others. It's the business of everyone to always be alert to the menace and destructiveness of a fire anywhere, anytime. Every reasonable safety precaution should be taken to prevent fire from starting, and both manual and automatic fire-fighting facilities, always in working order, should be provided for quickly extinguishing any fire that starts. Every fire was a small fire at the beginning—easy to extinguish if effective action were taken immediately after or very shortly after it started.

New Book on Allyl Halides by Shell Chemical Corp.

A new 136-page book, "Allyl Chloride and Other Allyl Halides," has just been published and is now available on letterhead request from Shell Chemical Corporation, 500 Fifth Ave., New York, N.Y., or 100 Bush St., San Francisco, California.

Intended to serve as a primary source of information on allyl chloride, fluoride, bromide and iodide, the book combines in one volume a comprehensive review of published literature with hitherto unpublished data from the research and engineering staffs of Shell Development Company.

Over half of the book is devoted to a discussion of allyl halide reactions, which are classified by type and include compounds formed by the independent or simultaneous reaction of the olefinic bond and the halogen atom. A description of physical properties includes infra-red and ultra-violet spectra. Storage, handling, specifications and test procedures are outlined.

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Visit A Paint Plant; Learn More Facts

★ It is surprising how many users of paints, varnishes and lacquers have never seen these materials made. The finishing foreman and other executives in establishments where finishing materials are used can learn much of interest and value by visiting the factory of one of the company's paint suppliers. It would be interesting to observe the care and thought that go into every batch of paint material produced.

Paint, varnish and lacquer manufacturers are usually glad to have their customers or potential customers visit their plants and laboratories. Progressive manufacturers will be proud to point out and explain the operations of modern paint making equipment. They will take their guests through the laboratories and point out where every raw material is checked and tested before it is approved for production use.

They will demonstrate the various pieces of complex laboratory equipment necessary to evaluate batches of paint materials. They will show where the development work on new finishes is carried out month after month, year after year, and will explain the workings of the control laboratories where all finished products are rigorously tested before approval for shipment.

If you are working with paint, varnish, lacquer or synthetics, ask a

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials and pays for those used.*

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manufacturer for permission to visit his factory and laboratory. You will learn to understand and appreciate how paint is made, tested and evaluated, and you will be better able to put more into and get more out of your daily work because of this knowledge.—M.A.G.

Executives to Confer on Production Improvement

The American Management Association announces that its Production Division will sponsor a meeting of executives April 3 and 4, in New York, to consider more effective use of production facilities and personnel in all kinds of American business.

Grosvenor S. McKee, AMA production vice president, and vice president and works manager of Talon, Inc., Meadville, Penna., said that the meeting would explore the program of a company in Amsterdam, N.Y., which has saved $1,500,000 in three years, and the control system used by the Koppers Company, Pittsburgh, in its highly diversified operations.

He said there would also be two panel discussions on the coordination of production, sales and engineering, and the impact of pensions on production.

Among other subjects to be discussed at the six sessions of the conference will be foremen participation in management, work measurement and incentives for indirect labor, development of maintenance programs, the relation of plant layout to cost reduction, and prospects for production expansion during the next year.

Grand Rapids Varnish Co. Has Extensive Laboratory

Labortories of the Grand Rapids Varnish Co., Grand Rapids, Mich., occupy two floors in the new office and laboratory building. A half dozen individual labs are ready to handle any problem in the finishing field. These labs and the salesman's contacts are the beginning point of most of the firm's new business. The company maintains 33 men on its laboratory technical staff—actually more than one technical man to every three production men.

"The development, testing and application of formulas for industrial finishing materials is a highly specialized science," Howard C. Lawrence, President, declared in one of his recent annual reports. "We offer the services of trained, experienced people in the use of our finishes in a wide variety of applications. Scientific research is a tool that we place at the disposal of every industry using coatings of an exacting character."

Worker Meets Fire Extinguisher

If we knew when or where accidents would happen next, very little safety work would be necessary. If we knew when or where the next fire would occur, the problem of fire safety would be simple. Because we don't know these things, we must be prepared for the worst, and be prepared at all times.

With fire safety, the essential thing is prompt action after the fire once starts, and this action may have to be taken by people untrained in fire extinguishment and in the use of the fire-fighting equipment.

For this reason, the first-aid fire fighting equipment placed around the plant usually has on it directions for its use. Unfortunately, these directions are all too often not simple enough, or hard to read, or obliterated, or even unintelligible to the illiterate. Uncounted millions of dollars in plant values are today in almost every community entrusted to the care of employees who are, in an emergency, incapable of fire fighting.

Although it is not necessarily new, the idea is still good, to prepare careful and simple directions that can be posted on or near the different pieces of first-aid fire-fighting equipment. Such directions may be printed, hand lettered or mimeographed.

Most safety engineers might have difficulty in stating, without hesitation, the definitions of Class A, Class B, and Class C fires. It is unreasonable, therefore, to expect the average employee to interpret immediately these classifications when they are used to designate the uses for various pieces of fire-fighting equipment.

First, of course, only such pieces of fire-fighting equipment should be

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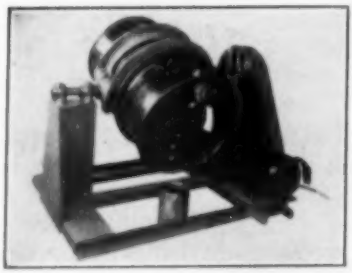

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placed in a departme.' as can be safely used in that department or area. Following this precaution, some companies have devised simple signs, printed on ordinary paper, to be attached individually to each piece of first-aid fire-fighting equipment. These signs provide directions for the use of the equipment and can usually be prepared in a form understood more quickly than the directions for use which are stamped or marked on the equipment.

The possibility of fire is always present, and a quick look about almost any industrial plant will disclose possibilities enough to make the safety engineer shudder.

It would be difficult, if not impossible, to make sure that every employee is completely and thoroughly trained as a fire-fighter. The next best thing to do is to see that his reactions, when confronted with the emergency of a fire, will not guide him into wrong actions that would increase the danger of the fire. Simple and unmistakable directions for the use of extinguishing equipment will help to accomplish this end.—*National Safety Council.*

Beautiful Exotic Woods Attractively Finished

Some of the new occasional furniture, such as odd tables, chests and commodes, is made entirely or in part of such tropical woods as zebra, rosewood, avoidire, teak, etc., and a few new-comers. Among these are Tamo which has no sharp color contrasts but derives its beauty from its pale straw color and curly mottled grain figure.

Another strange wood is Peroba, a satiny wood with a decided wavy grain. It is also of the straw or honey color. Both woods lend themselves effectively to blond finishes. Then there is Myrtle burl with its dark irregular brown and almost black

blotches on a blond gray-green background.

All of these attractive and fascinating woods provide a wide selection of finish treatments, in combination with other domestic and foreign woods. Most of these rare woods are dense and rather hard in texture; they have end grain in the burl and mottled figure. Here the expert finisher is offered a challenge and an opportunity to exhibit his artistry and skill.

Usually the finishing job includes one or more thin clear penetrating sealer coats, each followed by light sanding with fine sandpaper, and possibly a trace of staining or color treatment in one or more places to subdue or hide some discoloration, or to enliven some almost dead area, and then clear top coats of water white lacquer for finishing. Rubbing, buffing or polishing may follow to add to the smoothness and to give just the right degree of luster.

D. H. Jones Becomes G.S.M. for Irvington Varnish and Insulator

The Irvington Varnish & Insulator Co., Irvington, N.J., announces the appointment of Donald H. Jones as general sales manager of its Coating and Fibron divisions. He was formerly sales manager of two other large concerns.

Products sold by the Coating division include all Irvington and Harvel insulating varnishes, as well as all coated insulating products including varnished and silicone coated cambric and other fabrics and papers; tubing, sleeving, slot insulation, etc.

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Oakite Features Cleaning Materials at Philly ASTE Exposition

Oakite Products, Inc., New York, long-time manufacturer of specialized cleaning products, will feature recent additions to its line of metal cleaning and allied materials in Booth 565, at the Tool Engineers Exposition in Philadelphia, April 10 to 14.

In line with Show's "Cost-Cutting" theme, exhibit will prominently feature Oakite Compound No. 33, a new, acid-type cleaner and surface-conditioner for ferrous metals and aluminum, as well as Oakite Composition No. 38, a recently developed material which forms a dense foam-blanket on pickling solutions to prevent the escape of acid fumes.

Other specialized materials highlighting this manufacturer's display will be: Oakite Composition No. 91 and 91-A which, when used together, are reported to provide improved electro-cleaning of brass and copper; Oakite Composition No. 90, an electro-cleaner for steel; Oakite Composition No. 97, an emulsifiable solvent for use in automatic washing machines to preclean steel, cast iron, brass, aluminum and zinc before electroplating or pre-paint treatment or between processing operations; Oakite Pickle Control No. 3, a specially designed inhibitor for pickling solutions that prevents waste of acid after scale or rust is dissolved; Oakite Compound No. 36, an acidic cleaner for tank-conditioning of metals for paint; and Oakite CrysCoat No. 87, for low-cost pre-paint conditioning of iron, steel, zinc, aluminum and copper alloys in mechanical washing machines.

Oakite booth will be staffed by J. J. Basch, Philadelphia Division Manager, assisted by main office chemists, engineers and metal specialists from the company's field service organization.

W. P. Fuller & Co., Buys Sound Paint Mfg. Co.

Purchase of the Sound Paint Mfg. Co., Seattle, Wash, is announced by President A. H. Brawner of W. P. Fuller & Co. Under the new arrangement, the plant will be operated as the Sound Paint Mfg. Co., Industrial Division of W. P. Fuller & Co.

Since its inception in 1937, Sound Paint Mfg. Co. has specialized in the production of industrial finishes and has become a leader in this field in the Pacific Northwest. The plant is located at 1437 Leary Way in the Ballard district in Seattle.

Wm. F. Grubb, founder and owner of the company until its sale to Fuller, will remain as manager of the new division.

Acquisition of the Seattle plant is the newest step in Fuller's expansion of its activities in the industrial finishes field. The company recently placed in operation a $1,500,000 specialized industrial products factory at South San Francisco, and the firm's Los Angeles factory makes a considerable volume of special finishes for industrial and aircraft accounts in that area.

Automatically Oils Slat Conveyors

An automatic oil lubricator for slat conveyors, that requires positive timing, is designed and built by The J. N. Fauver Co., Inc., 49 W. Hancock, Detroit 1, Mich.

Wagner Bros. Appoints Breithart District Sales Manager

Wagner Brothers, Inc., 400 Midland, Detroit 3, Mich., manufacturer and supplier of polishing materials and equipment, announces the appointment of H. J. "Dick" Breithart as District Sales Manager, Buffing and Polishing Products. He will also handle sales of the company's new automatic buffing and polishing compound applying devices known as the "Applimatic" and the "Spray-matic".

"Dick" Breithart is well-known to the metal finishing industries through his past activities with other concerns in this line.

Canned Liquid Plastic Spray for Drawings and Pictures

"Krylon" is the name of a thin clear liquid-plastic protective coating developed by Foster & Kester Co., Inc., 2601 N. Broad St., Philadelphia 32, Penna., for use as a transparent preservative coating on original drawings, documents, photographs, paintings, etc.

Spraying Krylon on a new clean blueprint.

Base of the finishing material is a synthetic called Acryloid. The propellant (which forces the liquid finish from a small nozzle in the can) is refrigerating gas called Freon—colorless, odorless and non-inflammable. The Acryloids and Freon are mutually compatable and therefore capable of working together as an aerosol. The coating "Krylon" dries quickly and the film it produces is flexible, water repellant and durable.

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Mixes all fluids, including oils, chemicals and other such solvents.

It will handle quantities from 1 qt. to 5 gal. in a satisfactory manner. It is provided with a standard a-c 110 v motor with on-and-off switch. All parts are fully rustproofed with stainless steel shaft and mixing paddles, eliminating all probable rust and corrosion.

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As finishing foreman. Have had 24 years of supervision, 15 years on conveyor, TV and radio cabinets and top furniture. Address IF-720, care Industrial Finishing.

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15 years' experience in finishing on metal, wood, glass, plastic, etc.; air drying and bake finishes; complete knowledge silk screening; flocking; assembling and packing; perfect color matcher—wants position with reliable manufacturer in New York area. Will relocate if necessary. Write DEPT. LF, FURMAN, FEINER & CO., 117 W. 46th St., New York, N. Y.

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Experienced Paint Spray Equipment salesman. Good salary plus commission. Address IF-712, care Industrial Finishing.

SALESMEN WANTED.

Experienced industrial paint, lacquer, varnish and enamel salesmen for territories in Illinois, Indiana and Kentucky. Excellent remuneration. Our salesmen know of this ad. Information held in strictest confidence. Address IF-722, care Industrial Finishing.

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Excellent opportunity for industrial coatings salesmen. Must be experienced and have good following. We can guarantee excellent materials at competitive prices. Well organized laboratory and plant. Territories: New England, Middle Atlantic and Southern States. Give details in full. Address IF-705, care Industrial Finishing.

SALESMEN WANTED.

Production Line Finishes. Established reputable company requires the service of two men with at least one year's selling and technical background. Good drawing account, no traveling. Territories Philadelphia and New Jersey. Address IF-724, care Industrial Finishing.

WANTED.

Weather-ometer, slightly used, recent model in good condition. Model DL-TS twin arc or equivalent. We will have to inspect it before purchase. SWITZER BROTHERS, INC., 4732 St. Clair Ave., Cleveland 3, Ohio.

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Will Buy your dirty Thinners and Solvents. Send sample or letter giving approximate contents and solids. Address THE JOHANN CO., 633 E. 138th St., Dolton, Ill.

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Oven—Gehnrich gas fired. Clear inside dimensions, 21x6x6-ft. DOWER FINISHING & RESEARCH CO., 126 Ralph St., Belleville 9, N. J.

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Appoint one of your top executives as Savings Bonds Officer. Tell him to get in touch with your State Director, Savings Bonds Division, U. S. Treasury Department.

The State Director will provide application cards for your employees to sign—plus promotional material and personal help.

Employees who want Savings Bonds will fill-in the applications.

Your payroll department will arrange to withhold the specified amounts, arrange to get the Bonds, and deliver them to the employees with their pay.

The Bonds may be obtained from almost any local bank or from the Federal Reserve Bank or may be issued by the company itself upon Federal certification.

If you're skeptical as to how many of your employees would like Payroll Savings, just canvass your plant. Within only six months after one doubting manufacturer installed the Plan, half his employees signed up. A prominent aircraft manufacturer, whose company had used the Plan for some time, was not aware of its potentialities until his personal sponsorship increased participation 500%!

The benefits of Payroll Savings are big. The individual employees gain security—Bonds return $4 for $3 at maturity. The company gains from the resultant increased stability and efficiency of its workers. The whole nation gains because Bond sales help stabilize our economy.

Better talk with your State Director!

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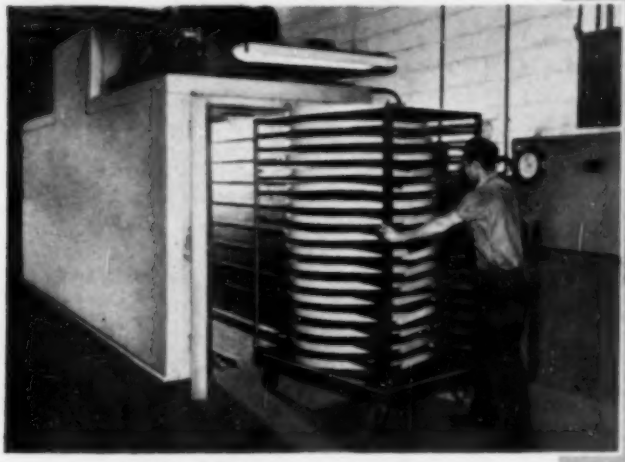

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